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ABSTRACT

This series of self-instructional units was designed to acquaint new instructors with the special mission of the community college and with teaching and evaluation strategies that enhance instructor effectiveness. Unit I considers the open-door philosophy and curricular and governance characteristics of the community college, while Unit II profiles the academic and demographic characteristics of community college students. Unit III introduces the instructor to student personnel services that can promote student retention and success. Unit IV teaches instructors to write performance objectives and plan instructional outcomes. Unit V suggests ways of enhancing learning, motivation, and student-teacher communication. While Unit VI focuses on large group instruction, providing guidelines for selecting instructional methods and for making optimal use of lectures, discussions, and demonstrations, Unit VII deals with individualized instruction, describing contract learning, self-instructional packages, self-paced modules, personalized systems of instruction, and audio-tutorial methods. Unit VIII is concerned with the selection and use of instructional media. Unit IX provides guidelines for constructing true/false, multiple-choice, matching, short answer, and essay tests and introduces criterion references. Unit X presents a student evaluation process centered around criterion-referenced grading. Each unit identifies objectives, provides reinforcement exercises, and suggests further readings. (JP)

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ORIENTATION TO INSTRUCTION
IN THE
COMMUNITY COLLEGE

A Series of Ten Self-Instructional Units

for

Part-Time Faculty Members, and Other

Instructors New to the Community College

The League for Innovation

in the Community College

Funded by the Fund for the

Improvement of Postsecondary Education

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Terry O'Banion

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NOTE TO THE USER OF THESE UNITS

For those of you new to the community college movement, welcome! We have found community college teaching to be a most stimulating and rewarding activity.

These self-instructional units were prepared primarily with the part-time community college faculty member in mind. However, the content should be of use to all instructors. Your community college district has made the materials available to you for several purposes.

1. Community colleges are new and different institutions with a special philosophy and mission. Your role as an instructor will be more comfortable if you know the special institutional mission.

2. Community college students are extremely varied with different needs. Your effectiveness as an instructor will be greater if you anticipate these needs and plan to take them into account.

3. With prior planning you can markedly increase the amount which your students learn. The teaching and evaluation strategies in these units will help you in your planning.

Reading through these materials will be more beneficial if you work the exercises and take the progress checks at the end of each unit. For example, we are sometimes told by instructors that they "are familiar with" objectives--yet on further discussion find that they may be uncomfortable and unskilled at writing objectives for their own instruction. We hope you will be able to involve yourself in such practical exercises incorporated within the readings.

Each unit has a list of references for any who want more specific assistance in certain areas. An excellent film strip series is also listed which has a very comprehensive set of topics.

Please feel free to seek out administrators or faculty members of the college to further discuss any aspects of your assignment. These materials provide a beginning point which may generate more involvement with your colleagues.

The next page provides a list of titles in this series with a short purpose statement. You may wish to review these before beginning the series.

ORIENTATION TO INSTRUCTION IN THE COMMUNITY COLLEGE

TABLE OF CONTENTS

UNIT	TITLE
1	THE COMMUNITY COLLEGE: PHILOSOPHY AND CHARACTERISTICS Meeting community needs through the comprehensive curriculum and the open door.
2	MEET THE STUDENTS How the open door allows the highly diverse students in your community to return for educational needs throughout their life.
3	HELP FOR YOUR STUDENTS THROUGH STUDENT PERSONNEL SERVICES How to locate the services available to your students. These services should help your students stay in school.
4	PLANNING INSTRUCTIONAL OUTCOMES How to write objectives to guide instruction.
5	CAUSING LEARNING Using 6 principles of learning and 6 motivating procedures; 3 ways to improve communication.
6	GROUP METHODS OF INSTRUCTION Improving lecturs, discussions, laboratory and demonstration presentations.
7	INDIVIDUALIZED INSTRUCTION Mastery and contract learning; kinds of self-instructional packages and modules; audio-tutorial and Keller plan.
8	USING MEDIA TO IMPROVE INSTRUCTION When and how to use more than the spoken word.
9	TEST CONSTRUCTION Preparing true-false, multiple-choice, matching, short answer, and essay questions. Criterion referencing and scoring procedures.
10	GRADING AND EVALUATION Minimum 5-step evaluation procedures Traditional norm-referencing procedures

THE COMMUNITY COLLEGE:
PHILOSOPHY, CHARACTERISTICS

UNIT 1

THE COMMUNITY COLLEGE:

PHILOSOPHY, CHARACTERISTICS

UNIT 1

INTRODUCTION

Whether you are new to the community college or have taught there for some time, welcome to the most unique and ambitious educational movement in the nation. This unit is an attempt to make you aware of the differences between community colleges and other institutions of higher education.

OBJECTIVES OF UNIT

Since the community college is intimately involved with the community it serves, you are likely to be asked questions about your courses and the entire college program. When you have completed this unit, we hope you will feel more confident in answering questions from average citizens in the community regarding:

- -the open-door philosophy of the college,
- -the comprehensive nature of the college program,
- -the way citizens can express their needs to educational planners.

We also hope you will know where to turn for further information regarding your role and responsibilities as a community college instructor.

YOUR ROLE AS A FACULTY MEMBER

QUESTIONS ABOUT COLLEGE

Take a moment and look over the questions below, assuming that they were asked by members of the community. Which questions represent what you consider to be legitimate inquiries? Which requests should be taken into account in future planning?

1. "Do you have a program to train dental receptionists? I saw jobs advertised for this."

2. "Do you have a refresher course in business arithmetic? My boss won't advance me without it."

3. "I want to take a painting course. Do you ever have art shows, or evening speakers on art?"

4. "Do you have any courses in child care that talk about emotional health and nutrition, and things like that?"

5. "There are several classes I want to take, but I can only come evenings and Saturdays."

If you answered that all were legitimate inquiries and useful to planners, then you are likely to find your role as a part-time faculty member in a community college a comfortable one.

GOALS OF THE COMMUNITY COLLEGE

Certainly, an important goal of community colleges is to provide the first two years of undergraduate college education, so that those who wish may transfer for further coursework in four year colleges. Occasionally, instructors are unaware of other important goals of the community college.

RESPONSIVE TO COMMUNITY

Community colleges have been called "peoples' colleges" and "democracy's colleges" because they grew in response to social needs of the communities they serve. Community colleges also respond to the national goal of education for all.

COMPREHENSIVE PROGRAMS

Community programs are governed by boards of trustees. These representatives of the public have the responsibility of assuring that the college programs are designed to meet a braod array of needs of citizens in the community.

PROGRAMS FOR ALL

Community colleges are also committed to providing programs for all citizens who can benefit from them. They operate on the assumption that every citizen has the right to further education beyond high school.

OPEN DOOR POLICY

Community colleges are not exclusionary. They do not try to select top students. They try to provide useful programs for all. They stay geographically close to the community served. they try to minimize tuition. They attempt to make educational programs readily accessible.

Ask a college staff member what activities and procedures your college uses to encourage community participation.

TEACHING EXCELLENCE

In light of these commitments, your role as an instructor in a community college becomes central. For citizens to benefit from college programs, they must learn well from the programs provided.

COMMITMENT TO TEACHING EXCELLENCE

Community colleges are teaching institutions. The instructor's role is of crucial importance in providing well-planned and effective instruction.

Thus, the college's mission is achieved when your students learn what you try to teach them.

GOALS IN COLLEGE CATALOGUES

College catalogues are not usually thought to be entertaining reading. However, examine in a special way some phrases often found in community college catalogues. Consider the excerpts which follow to be the terms of a social contract. The board of trustees, the college planners, and you have entered into this contract with the citizens of the community. The money which you receive is earned to the extent that you can contribute to these college goals:

> . . .college should be responsive to the needs of the community, help equip students for effective living and responsible citizenship;
>
> . . .college must provide leadership in educational and cultural matters;
>
> . . .institution will provide opportunity for each individual to seek a high level of cultural, intellectual, physical, and social development, and a high level of technical competence;
>
> . . .entire staff will maintain high professional standards within guidelines set by the board of trustees;
>
> . . .all employees are jointly charged with the accomplishment of the college and department goals.

GOALS OF INSTRUCTION

You may feel that the above goals are somewhat general, although they certainly have implications for the manner in which you conduct your instruction. Let us look at those goals which relate more specifically to instruction. Community colleges are student-oriented. As one very large district (with more than one college) noted:

"The district is a learner centered institution. Thus the central purpose of all colleges in the district is to provide good service to all who participate in its programs. . ."

LEARNER CENTERED INSTITUTION

The statement of instructional philosophy further spells out what is meant by a learner-centered institution:

LEARNER CENTERED INSTITUTION -continued-

An effective, learner-centered, educational environment should provide the student:

° The right to choose among options; or to create new options; or not to choose.

° The ability to choose among options, or to create new options.

° The options available from which to choose, or the resources and processes available to create new options. That is, a variety of course offerings and instructional resources should be provided to meet various learning styles, motivations, and perceptions.

Obviously, the more comprehensive the offerings of a college, the greater the variety of options from which a student can choose.

COMPRE-HENSIVE PROGRAMS

What are the kinds of programs which are thought to be useful in providing a comprehensive curriculum? Please skim the categories below, paying attention to those with which you are least familiar. As a community college instructor, sooner or later, you will be asked by your clients --the citizens in the community--to describe various aspects of college programs.

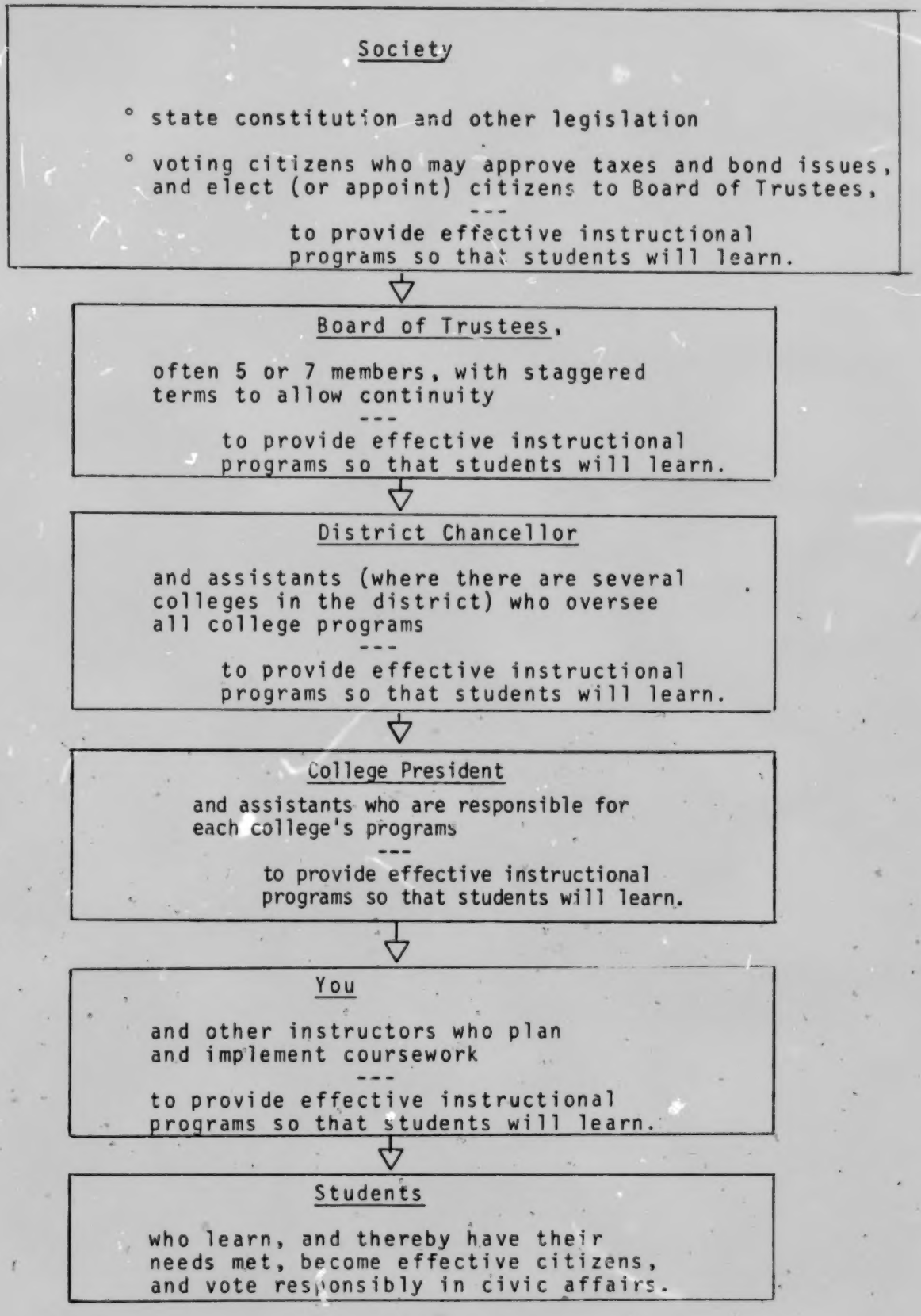
TYPICAL COLLEGE PROGRAMS

TRANSFER PROGRAMS	Students may select courses and programs in the liberal arts and preprofessional areas designed primarily for students planning to transfer to senior institutions by the junior year.
GENERAL EDUCATION	This area includes courses drawn from many subject fields which prepare students "for living"--as contrasted with courses which provide skill for "making a living." The selected general education courses are designed to prepare students for responsible citizenship; help them increase competence in communication skills; improve their understanding of cultural heritage and physical and biological environment; and aid in developing a balanced personal and social adjustment.
TECHNICAL/ OCCUPATIONAL EDUCATION	This program includes courses which equip students, in two years or less, with the skills and technical knowledge required for successful employment in technical and occupational fields.
CONTINUING EDUCATION	Generally, all credit courses and programs offered to daytime students are made available to evening and Saturday students, most of whom elect not to attend the regular day sessions.
DEVELOPMENTAL EDUCATION	The colleges offer special courses, programs and learning experiences designed to build basic educational skills and to remedy learning deficiencies, particularly in the communication skills and basic mathematics. Emphasizing the learner, the District's broad developmental programs also offer course and individualized learning experiences in human development and human potential. Study skill programs, both formal and informal, are available to all students.
COMMUNITY SERVICE PROGRAM	A variety of non-credit courses of varying length are offered at numerous locations in the District in an effort to serve diverse needs and interests. These courses include cultural, civic, business, enrichment and avocational activities. Admission is generally on a first-come, first-serve basis.

HOW IS THE COLLEGE GOVERNED?

COLLEGE STRUCTURE

Instructors sometimes feel isolated from those responsible for governing the college. Nevertheless, there is a very real structure. Your college's administrative structure is likely to resemble the chart on the following page. The instructor's role is of paramount importance in achieving the mission of the college.


Society
° state constitution and other legislation
° voting citizens who may approve taxes and bond issues, and elect (or appoint) citizens to Board of Trustees,
---
to provide effective instructional programs so that students will learn.
Board of Trustees,
often 5 or 7 members, with staggered terms to allow continuity
---
to provide effective instructional programs so that students will learn.
District Chancellor
and assistants (where there are several colleges in the district) who oversee all college programs
---
to provide effective instructional programs so that students will learn.
College President
and assistants who are responsible for each college's programs
---
to provide effective instructional programs so that students will learn.
You
and other instructors who plan and implement coursework
---
to provide effective instructional programs so that students will learn.
Students
who learn, and thereby have their needs met, become effective citizens, and vote responsibly in civic affairs.

BOARD OF TRUSTEES RESPONSIBILITIES

The Board of Trustees bears legal responsibility for all aspects of the operation of the college or district. Specific responsibilities most closely related to instruction usually include the following:

1. approve policies regarding admission, retention, scholastic standards, record keeping, registration, and student conduct;

2. approve courses and curricula which are part of the college program;

3. approve administrative recommendations regarding appointment or dismissal of employees.

PRACTICAL EXERCISE

Try applying some of this information in this posed situation:

A neighbor says to you:

1) "My son is graduating from high school. His grades are average, and he doesn't know what he'd like to do. He has had a couple of part-time jobs that interested him. What does the college have to offer?"

   What alternatives would you mention to the neighbor? You may wish to refer back to page 6; then compare notes with our answer on the next page:

   _____
   _____
   _____

2) Please examine the organization chart on page 8. Who should be approached by a concerned citizen wanting to make some recommendations about the college program?

   _____

3) Re-examine page 3, and write down some ways colleges attempt to provide an "open door" or ready access:

   a _____
   b _____
   c _____

ANSWERS

1) Perhaps your answer included a few of these available options:
   -full time or evening programs,
   -some technical and occupational programs,
   -study skill improvement programs,
   -general education courses,
   -courses for transfer to 4 year colleges.

2) If you wrote Board of Trustees, Chancellor or President, you are right. However, the most practical approach would be to contact the Chancellor's or President's office for the name of the appropriate Dean or Director to help you.

3) You may have written:
   a) no exclusionary attitude,
   b) programs for general public,
   c) geographically close to community served,
   d) minimize tuition

GRADING SYSTEM

Be sure that you have a description of the grading system which has been approved by your Board. This information is usually available in the handbook of policies and procedures as well as the college catalogue. You may have been given a copy of the grading procedures by the person who hired you.

BOARD POLICIES

Determine the location of the manual which describes Board policies and procedures. Review these policies so that you know some of the constraints and responsibilities which affect you as an employee.

SUMMARY

You may wish to pursue some of these matters further. The references listed at the end are suggested. If you wish to determine the effectiveness of this unit, complete the Progress Check on the next page.

THE COMMUNITY COLLEGE: PHILOSOPHY, CHARACTERISTICS

PROGRESS CHECK

UNIT 1

(Check your answers on next page)

1. Name 2 sources where you might find the established grading system of the college:
   a. _____
   b. _____

2. Name two features of community colleges which illustrate the "open door" policy:
   a. _____
   b. _____

3. Suppose a friend said to you "I wish the college would offer some night courses on how to grow more of our own food. Should I ask about this? Or would it be a waste of time?"

   What would you say in response?

   _____
   _____
   _____

THE COMMUNITY COLLEGE: PHILOSOPHY, CHARACTERISTICS

SCORING KEY

UNIT 1

1. College catalogue, College policies and procedures manual, Faculty handbook, other College staff members such as the Academic Dean, Offices of the President or Registrar, the person who hired you.

2. -Geographically close to community served,
-Tuition minimized,
-Enrollment policies not exclusionary

3. You might have responded in this fashion:
"Yes, because the college is committed to trying to provide programs which people need and want."

REFERENCES

UNIT 1

On student-oriented instructional philosophy:

Silber, Kenneth. "Technology and Freedom." Educational Technology, January, 1971.

On student differences and the comprehensive curriculum:

Cross, Patricia. Accent on Learning. Jossey-Bass, 1976.

Monroe, Charles. Profile of the Community College. Jossey-Bass, Inc., 1975.

General:

Evans, D. and Neagles, R. Planning and Developing Innovative Community Colleges. Prentice Hall, 1973.

MEET THE STUDENTS

UNIT 2

MEET THE STUDENTS

UNIT 2

INTRO-DUCTION

In the first unit the community college was described as heavily committed to meeting peoples' needs in the local area. Since college students come from the local community, we must know their characteristics and special needs. Only then can we design college programs which are realistic and useful.

OBJECTIVES OF UNIT

When you have finished this unit you will be able to describe many of the attributes which characterize the community college student. It is also hoped that you will feel comfortable explaining to the taxpaying public the reason for the open-door policy, based upon the special characteristics and needs of the student

STUDENTS IN THE OPEN-DOOR, LEARNER-ORIENTED COLLEGE

POST-SECONDARY EDUCATION FOR ALL

Instructors new to the community college need to be aware of the intense commitment to all post-secondary school students. One national leader of the movement has characterized the community college as an institution:

> . . .near to the people whose lives it hopes to improve, inclusive not exclusive in its concern, and willing to accept the individual differences of its varied student body rather than to press for selective admissions and homogenized graduates.
>
> (Raines, 1965)

OPEN-DOOR POLICY

A large southwestern community college district has prepared a similar statement for its part-time faculty members:

> The purpose of the comprehensive community college's open-door philosophy is to ensure that students from various educational, social and economic backgrounds can attend the institution. Educationally sophisticated students participate in the colleges' programs as do the educationally unsophisticated. With its low tuition policies, the college can provide post-secondary education to individuals who previously never could have had such opportunities.
>
> Students bring diverse aspirations and backgrounds as well as a variety of internally and externally derived pressures to the community college setting.

Another community college practitioner notes that the "open-door" policy recognizes that many institutions of higher education are closed to students. It also recognizes that all students have a right to further their education beyond the high school.

APPROPRIATE PROGRAMS

Letting everyone into the college does not imply low academic standards as is sometimes assumed. The student is provided with appropriate programs from which benefit can be obtained. So that schools and instructors can plan properly, a closer look at community college students is needed.

COMPARING STUDENT BACKGROUNDS

STUDENT TRENDS

Let's see how well you can predict features and trends in the students of community and junior colleges. Cover the right hand column below and try answering each question. Then see how your answer compares with the answer on the right.

1. The 1978 report "General Information on Two-Year Colleges" (published by the ERIC, Junior College) showed that of all freshmen entering higher education, what proportion start at community colleges?

   a) 1/4, b) 1/2, c) 3/4

   1/2

Some states are much higher: California community college students make up 76% of the state's higher education system (California CJCA News, March '79).

2. What percentage of community college students enroll in transfer programs? 1/3, 1/2, 2/3 ?

   2/3

   Of those who plan to transfer, how many actually do? 1/3, 1/2, 2/3

   1/2

Many pressures cause this change in plans. However, <u>those who do transfer perform as well as the students who attended the university from the beginning!</u>

STUDENT CHARACTERISTICS

Dr. K. Patricia Cross has reviewed the characteristics of community college students, and has found that today's students come from different socioeconomic backgrounds and higher education levels than those of their parents.

In addition, Cross found that the students are very practical; many work, and look to education for better jobs and improvement of social level. They rate themselves lower than university students in academic ability.

URBAN STUDENT BACKGROUNDS

Please examine the chart describing students at 4 campuses of a typical large urban community college district shown on the next page.

STUDENT STATISTICS 1976	CAMPUS A			CAMPUS B			CAMPUS C			CAMPUS D		
STUDENT COUNT	Male 3,865	Female 2,645	Total 6,510	Male 4,438	Female 3,397	Total 7,835	Male 5,455	Female 5,743	Total 11,198	Male 3,065	Female 4,183	Total 7,218
First Time in College		21%			24%			22%			18%	
ETHNIC GROUPS:												
Causcasion		67%			86%			92%			45%	
Black		20%			8%			3%			43%	
Latin Amer.		6%			4%			2%			8%	
Oriental		1%			0%			1%			1%	
Amer. Indian		1%			0%			0%			0%	
Unknown		6%			1%			2%			3%	
Number of High School Graduates		82%			82%			88%			79%	
Age Ranges		18-48			17-47			17-46			17-51	
Average Age		27			26			26			27	
Plan to Transfer		55%			36%			62%			47%	
Technical or Occupational Programs		19%			20%			16%			36%	
Day Students Only		45%			48%			52%			50%	
Night Students Only		45%			38%			35%			41%	

URBAN STUDENT BACK-GROUNDS -continued-

3. From the "Average Age" and "Number of High School Graduates," (most, few) students are recent high school graduates? — Few

4. There are almost as many night students as day students (true, false) ? — True

5. Which of the following do you think represent instructors' impressions of night students?*

Night students are viewed as:

a) Older	Yes
b) Working full time	Yes
c) Less concerned about educational goals	No
d) More patient with excessive assignments	No
e) Want only to come to classes (rather than to the library, etc.)	Yes

---

MINORITY GROUP STUDENTS

Last, let us look at minority group students. It is known that their:

1. Value structures are different
2. Vocabulary differs.
3. Motivational factors are different.

Instructors may have to examine lecture examples and vocabulary for relevance. Talking with an experienced instructor on your campus will be of value. Do not take for granted that you are communicating your material. Ask your students.

PRACTICAL EXERCISE

If someone asked you what values were most important for instructors who adopt the community college philosophy, what would you suggest? (Refer back to page 3 if you wish. Then compare your answers with those on the next page.)

Instructors must be willing to accept students who are:

1) _____
2) _____
3) _____

---

* As reported by a large urban multi-campus district.

ANSWERS

Your answers might have included some of these:

Instructors must be willing to accept students who might be:

1) of various races
2) of different ethnic background
3) older
4) low in self-confidence
5) working as well as studying
6) very practical, or job oriented.

SUMMARY

Review the material in this unit by answering the Progress Check which follows.

MEET THE STUDENTS

PROGRESS CHECK

UNIT 2

(Check your answers on next page.)

I. Please examine the list below and mark as to whether each feature is most related to:

Minority students (Mark "M")
Night students (Mark "N")
Community college students at large (Mark "CC")

____1. May have special vocabulary problems.
____2. More serious about educational goals.
____3. Probably working full time.
____4. Involved in campus activities.
____5. Resentful of excessive library assignments.
____6. Make up biggest proportion of college students.
____7. Make plans to transfer to 4 year colleges.
____8. Older

II. Suppose an acquaintance said to you, "Why do you let in all those people who aren't college material?"

What are 1 or 2 important points you might try to make regarding the community college students?

1) _____
_____

2) _____
_____

MEET THE STUDENTS

SCORING KEY

I. 1. M
2. N
3. N
4. CC
5. N (Although instructors of day classes would probably dispute this!)

6. CC
7. CC
8. N

II. We hope you expressed thoughts something like these:

Many people need and deserve post high school education; including those:

1) not eligible for university admission
2) who can't pay high tuition and can't travel far from home,
3) of minority racial or ethnic groups who have not previously had educational opportunities,
4) who wish to advance themselves in their jobs,
5) who see themselves as less able than university students,
6) who are older than typical university students,
7) who must work full or part-time.

REFERENCES

UNIT 2

On individual differences in students:

Cross, Patricia, "Higher Education's Newest Student." In Student Development Programs in the Community Junior College, Terry O'Banion, et al. Englewood Cliffs, New Jersey; Prentice Hall, Inc. 1972

On minority student characteristics:

Monroe, Charles R. Profile of the Community College. S.F: Jossey Bass Publishers, 1972.

On student motivation:

Roueche, J. and Mink, O. Improving Motivation. Austin: Sterling Swift Publishing Co. 1976.

STUDENT PERSONNEL SERVICES

UNIT 3

STUDENT PERSONNEL SERVICES

UNIT 3

DIVERSITY OF STUDENTS

Community college students are much more diverse and have a greater variety of needs in comparison to other college students. A rich variety of special services has been developed at community colleges across the nation. All are aimed at increasing the student's ability to select and benefit from available educational programs.

STUDENT SERVICES AVAILABLE

Your school is <u>not</u> likely to have all of the student services available which are mentioned in this unit. This is especially true if you are teaching a course off-campus. Nevertheless, some of the services will be available. You can assist your students to stay in school and benefit from your course by knowing how to refer them to appropriate college agencies.

OBJECTIVE OF UNIT

When you have completed this unit, you should be able to respond to student problems and inquiries by referring students to appropriate college facilities or staff members.

INSTRUCTOR'S GUIDE TO STUDENT SERVICES

UNIT AS A RESOURCE

This unit should be treated as a resource for locating those support services which will be most useful to your students. Some services will be more useful than others. As you look over the listing which follows, please do the following:

1. Mark this unit in such a way that items of special importance to you will be highlighted for future reference.

2. Identify those services which are so important that you wish to find out immediately how they are obtained. For example, as an instructor, you should know how to summon emergency assistance from fire, police, and health officers. You will be judged as responsible for appropriate action should one of your students need emergency assistance.

3. Remove the last page from this unit. It is entitled "STUDENT SERVICES REFERRAL SHEET." Mark the half-dozen services which you anticipate to be most important to your students. If you are not aware of how to summon emergency services, these should certainly be on your list!

Call the college staff member who arranged your employment or your division representative and ask if the services you identified are available. If available, ask where the student should be sent who needs assistance. Call the college security office for emergency telephone numbers.

Mark this information on the "STUDENT SERVICES REFERRAL SHEET" and keep the sheet handy for future reference! You will be able to add to it as you learn more about the many services available through your college.

LIST OF SERVICES

Read through the listing of services which follows. Mark special items as suggested above. At the end of the listing is a Progress Check to let you see how well you have prepared yourself to meet your students' special needs.

INVENTORY OF SERVICES AVAILABLE

-CONTENTS-

	Page
Campus Security Office (Police, Fire, Etc.)	3
Counseling Services	3
Student Activities, Special Events	4
Financial Aid	4
Job Placement Assistance	5
Housing Assistance	5
Health Center	5
Registration and Admissions Assistance	5
Veterans Assistance	5
Learning Resource Center (Library, etc.)	6

CAMPUS SECURITY OFFICE

May provide some of these services:

1. Will protect the users of the campus facility and the facility itself.

2. Will assist in contacting police and fire departments as needed. May be important that you contact fire department directly. Find out!

3. May be responsible for regulating parking, although, local police officials may have direct jurisdiction.

4. May provide Lost and Found assistance.

COUNSELING SERVICES

Several kinds of counseling may be offered, especially by larger community college districts. Your students need to be able to locate one or more of these:

1. Academic counseling provides assistance in making educational plans. Of especial importance for those who may wish to transfer to four year school.

2. Career counseling is useful to students who may be unsure of their goals. Usually involves self-assessment of skills and interests. Some tests may be administered. Counselor may help student examine an array of occupational choices in light of student skills profile.

3. Personal counseling often involves helping students with many different difficulties: conflicts with instructors, time management, test anxiety, or interpersonal relationships with family or peers. Severe problems may be referred off-campus.

4. Orientation counselors help acquaint new students with resources available on campus, and with placement in classes.

COUNSELING SERVICES -continued-

5. Faculty consultation. Counselors may be available to assist faculty members. Assistance may be available in helping faculty members provide an atmosphere of freer communication.

6. Human Development Courses are often available. These may include such generally useful courses as:

   -Educational & Career Planning,

   -Interpersonal Communication,

   -Developing Leadership.

7. Group counseling can sometimes be arranged for special topics such as test anxiety, career exploration, assertiveness training, etc.

8. Faculty members play a vital role in counseling students in formal and informal settings. Each faculty member will want to be accessible so that students can obtain needed help. Assistance may come directly from the faculty members, or through other agencies to which the faculty member refers the student.

STUDENT ACTIVITIES, COCURRICULAR PROGRAMS, SPECIAL EVENTS.

Many activities are provided using student activity fees and auxiliary services. Students should be encouraged to use those of interest. These may include:

1. Student government

2. Speakers and musical programs,

3. Films, and special videotapes,

4. Campus clubs and organizations

5. Dramatic productions, skits,

6. Mock elections, consciousness raising activities,

7. Dances, entertainment.

FINANCIAL AID

If lack of money threatens student ability to continue coursework, student should be urged to contact the Financial Aid office. The following kinds of assistance are sometimes available:

1. State and federal aid-to-students grants,

FINANCIAL AID -continued-

2. Various work-study programs,

3. Short term loans,

4. Scholarships.

PLACEMENT ASSISTANCE

This service is sometimes offered through the Financial aid office. The following services may be available:

1. Off-campus part-, or full-time positions listed.

2. Assistance provided for preparing resumes, or interview techniques.

3. Information may be available on employment trends and employment opportunities in fields of interest to the student.

HOUSING ASSISTANCE

This service may be combined with the placement office. Usually maintains lists of apartments and rooms for rent.

HEALTH CENTER

Often offers many services:

1. Emergency first aid

2. Health education; physical and emotional health counseling, including drug, alcohol, and sex education information.

3. Referral service to community agencies and physicians.

4. Screening programs such as glaucoma, blood pressure checks, pregnancy tests, TB skin tests.

5. Brochures, literature, speakers, and films on health topics.

REGISTRAR AND ADMISSIONS

Many important services are offered:

1. Maintains student transcripts, medical records applications and other files,

2, Evaluates transcripts to determine transfer credits,

3. Arranges for registration, schedule changes, and withdrawal from classes.

4. Accepts applications for degrees and certificates.

VETERANS SERVICES

The Veterans Administration (V.A.) may provide procedures on campus for students to receive services. These may include:

1. Financial assistance for training, including arranging for Veterans benefits.

VETERANS SERVICES -continued-

2. Counseling, tutoring, and job placement.

LEARNING RESOURCE CENTER

Those who haven't been on a community college campus for a while might think that we are referring to the library. However, many more services have been incorporated so that the "library" can be the focal point for providing a large number of support services to help students learn:

1. Ordinary circulation of books and other materials; instructors may place materials on reserve for students to assure that a class can have access to needed materials.

2. Reference service is available, sometimes over the telephone as well.

3. Various learning-aid equipment may be available, such as typewriters, record players, stereo headphones, cassette players, cassettes, filmstrips, audio and video cassettes (including those available as TV courses), and record collections.

4. Special services may be available such as tutoring, math and communications labs, independent study centers or computer assisted instruction.

5. Instructional development; assistance with instructional planning.

6. Assistance with graphic arts, photography and duplicating services.

Call the "L.R.C." or your Evening Administrator for assistance in finding out what is available.

SUMMARY

To review the unit, take the Progress Check on the next page.

STUDENT PERSONNEL SERVICES

PROGRESS CHECK

UNIT 3

(Check your answers on next page.)

1. Suppose a student told you that she was moving out of state and couldn't attend class anymore. What would you tell her?

2. A student asks how she might contact others interested in a hobby aspect of your course. Where might she inquire?

3. Your students complain that the public library does not have a magazine article which you recommended. What would you do?

4. A speech is to be given on National Public Radio. You would like it to be recorded and made available to your students. Who would you ask for help in this matter?

5. After class a student tells you that he very much needs your class to keep his job. However, he says he has "a lot of problems with his wife and children." He may have to drop your class. What might you suggest?

STUDENT PERSONNEL SERVICES

SCORING KEY

UNIT 3

1. Tell her to be sure and withdraw from the class through the Registrar's office. She doesn't need an unearned "F". You might have suggested Counseling and Guidance for community college in new area.

2. Suggest the Student Activities office; also the community Services Office if there is one.

3. Call the Learning Resource Center or Library on the campus. Contact the Reserve Desk and ask if they will put the article on Reserve status for your students.

4. Call the Learning Resource Center and ask who might be able to help you. The Evening Administrator also should be able to help you. While you are at it, see if your college has a media service handbook.

5. We might say something like this: "If you would like to talk to someone trained to help with problems like these, you can call for an appointment at the Counseling Center." If you sense that the student might be reluctant to seek help, you might mention that he need only say that he wants to talk about a "personal problem" when he calls for an appointment.

   If problem needs immediate attention, you might suggest talking privately as soon as possible.

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UNIT 3

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STUDENT SERVICES REFERRAL SHEET

Keep readily available for quick reference

_____ Community College Campus _____ Instructor

SERVICE AVAILABLE?	Type of Service Provided:	How to contact office of person:
____	Campus Security Office	_____
____	Lost & Found	_____
____	Parking	_____
____	Fire	_____
	Counseling	_____
____	Academic	_____
____	Career	_____
____	Personal	_____
____	Orientation	_____
____	Faculty Consultation	_____
____	Human Development Courses	_____
____	Student Activities	
____	Cocurricular programs	_____
____	Special events	
____	Financial Aids Office	
____	Work-study programs	_____
____	Scholarships	_____
____	Loans	_____
____	Placement Office	
____	List of jobs available	_____
____	Job-seeking assistance	
____	Local employment market statistics	_____
____	Housing Office	_____
____	Health Center	_____
____	Emergency First Aid	_____
____	Health Education, mental and physical health counseling	_____
____	Registrar and Admissions Office	_____
____	Transcripts, medical records	_____
____	Transcript credit evaluation	_____
____	Registration & Schedule changes	_____
____	Degrees, Certificates	_____
____	Dropping courses, Withdrawal	_____
____	Office of Veteran's Services	_____
____	Learning Resource Center	
____	Library circulation services	_____
____	Reference service	_____
____	Typewriters, AV equipment	_____
____	Tutoring services	_____
	Other: _____	_____

PLANNING INSTRUCTIONAL OUTCOMES

UNIT 4

PLANNING INSTRUCTIONAL OUTCOMES

UNIT 4

OVERVIEW

How does society decide whether a student has learned? Is it possible to know for sure whether educational programs are producing desired, intended learnings?

This unit will show you how to describe instructional outcomes in terms of performance objectives so that you can determine if your students have learned.

INTRO-DUCTION

Performance objectives are written for several reasons. When an instructor states a performance objective it is clear what the student will be required to do to successfully complete the lesson or the course. The degree to which the student is able to perform the task in the manner specified provides you, the instructor, a means for evaluating both the student and the instruction. If the objectives are available to the students the learners, too have a means for evaluating their progress toward achieving the stated objectives. Finally, performance objectives provide the basis for selecting appropriate materials and instructional procedures.

OBJECTIVES

When this unit is completed you will be able to:

1. Identify statements of instructional performance objectives.

2. Write performance objectives so that they describe observable behavior.

3. Write performance objectives for three types of learning tasks in a selected area of instruction.

4. List several advantages of preparing performance objectives in advance of instruction.

PERFORMANCE OBJECTIVES

Performance objectives are useful to you as in instructor in several different ways. They describe what the students will be able to do at the time they leave the course. Performance objectives also assist you to prepare measuring instruments to evaluate the adquacy of learner performance. Objectives aid the learner and teacher to better organize activities leading to the performance desired.

> One example of an objective is: "Given a list, the student will be able to select the three major events that led to World War II."

Well-written performance objectives contain four major components. They are:

1. Identification of the learner. (e.g., "the student")
2. A description of the intended behavior, or a product of behavior. (e.g., "to select")
3. Specification regarding the conditions in which the behavior occurs. (e.g., "given a list")
4. Specification of performance levels in terms of quality or quantity. (e.g., "three major events")

Let us now consider each of the components. The first of the components deals with the learner. A well-formed objective must specify who is to demonstrate the outcome. If the answer is the student, the objective is well-formed. An objective does not refer to the instructor who is presenting the instruction, but rather to the individual who must do the learning.

IDENTIFYING COMPONENTS OF OBJECTIVES

Place a check (✓) beside the number of each item which specifies it is the learner who is expected to meet the objective.

_____ 1. The causes of the Civil War will be discussed.

_____ 2. The student can name the campital city of each of the New England states.

_____ 3. Each member of the class will construct a model of a hydraulic jack.

_____ 4. To cover the concept of "central tendency" in the first lecture.

> You should not have checked item 1. If the learner is to develop the ability to discuss the causes of the Civil War, the objective must state this. Item 2 meets the first criterion of a well-formed objective and should be checked. Item 3 should also be checked, specifying that it is the student who is to perform. "Each member of the class" is synonymous with what a learner would do. Item 4 should not be checked. This item seems to describe what the teacher, and not the student, would do.

The second component of a well-stated performance objective describes what a learner does. Thus, the behavior is observable.

Consider the following objective: "Name orally the types of wood samples." "Name orally" is an observable behavior because this describes what the learner does. If the objective had read: "Name in writing the types of wood...." the behavior would be observable. "Name in writing" is the desired behavior.

Here is another objective: "To know the difference between a welded joint and a soldered joint." Does this objective describe observable behavior? It does not. "Knowing" is not an observable student behavior. The instructor writing the objective should define what "know" means in observable terms. There are a number of different behaviors possible for this objective. For example: the student describes the differences between welding and soldering, or, the student identifies by pointing to a welded joint and a soldered joint; or, the student constructs a welded joint and a soldered joint, etc.

By specifying an observable behavior in an objective the instructor greatly reduces ambiguity regarding the intent of his instruction,and the intent of later testing. Words like know, understand, grasp, etc. are open to a number of different interpretations and should not be used in performance objective statements.

You plan to write a test which measures achievement of objectives. Place a check (✓) by the objective which describes observable behavior on the part of the student, and which therefore can be easily tested:

_____ 1. The learner will list in writing the names of current congressional leaders.

_____ 2. The student will learn the set-up procedure for lathe operation.

_____ 3. The class will name the chemical compounds which are formed only in the presence of heat.

_____ 4. The student will paint a water-color portrait of a member of the family.

_____ 5. The student will understand how to apply Ohm's Law.

The correct answers to the exercise follow:

1. This item should be checked since the student is to list in writing. A list represents observable behavior.

2. This item should not be checked. "Learn" is not an observable behavior. We don't know if the student is to describe the set-up procedure, to list the set-up procedure, or to actually perform the set-up procedure.

3. This should be checked since "name" is an observable behavior whether perofrmed orally or in writing. Also, note that the term "The class" means the same as the learner or student.

4. This should be checked. "Paint" results in a product which we can observe.

5. This should not be checked. We cannot observe a student who understands unless it is clear what understand means, or how it is to be demonstrated.

The third component of a well-formed performance objective describes the conditions under which the behavior is to occur. The conditions refer to the environmental aspects of the situation under which the given objective is to be performed. Conditions are statements which specify exactly what is to be used by the student in performing the objective. In some cases the conditions need not be explicitly stated. However, if the usual conditions are to be altered, then the given conditions must be stated in the objective.

For example:

> "The student will list, in writing, the electrical tune-up procedure for a V-8 engine." This objective implies that the student write the list from memory and is not allowed to use any aids.
>
> However, if the instructor wanted the student to generate the list using a lab manual, the objective would read: "The student will list in writing the electrical tune-up procedure for a V-8 engine, given a lab manual." Remember, if the conditions are not specified, the objective implies that the student is to perform the behavior without any aids.

Identifying Components of Objectives

You are designing some test items for a set of objectives.

Place a check beside the number of each objective which contains an explicit statement of <u>given conditions</u> to be provided during the test.

_____ 1. The student will select the names of the five most recent governors of his state from an alphabetical list of all governors.

_____ 2. The student will calculate the volume of a cylinder given its measurements.

_____ 3. Given a slide rule, the student will find the square root of any two-digit number.

_____ 4. The student will describe the procedure for measuring blood pressure.

_____ 5. The student will punch computer cards employing both alpha and numeric entries using a key punch and the manufacturer's manual.

The answers to this exercise are shown below:

1. This item should be checked since the student is given an alphabetical list of all governors.

2. This item should also be checked because the student is given the measurements of the cylinder.

3. The student may use a slide rule so this item should be checked.

4. Since the student must describe the procedure from memory, this item should not be checked.

5. Check this one because the objective specifies what type of key punch the student is to use and also specifies that the student may use the manufacturer's manual.

The final component of a well-formed performance objective is the specification of the minimal acceptable standard or performance level of learner's performance. Standards specify the degree of success needed to meet the objective. Standards answer the questions: What degree of accuracy must be attained? What percentage of the items must be identified?, etc.

Consider this segment of an objective: Using a slide rule, determine the square root of any two-digit number to two decimal places." Since there is no standard specified, the objective implies that the student will complete the task with 100 percent accuracy. An objective with specified performance standards would read as follows: ".... Solder two pieces of metal together so that there are no air bubbles and the seam is shiny and smooth." Here, the standards are, "no air bubbles, and the seam is shiny and smooth."

You have now learned to identify the components of a well-stated performance objective. In the final section of the program, you are asked to write performance objectives.

Performance objectives, like learning tasks, can be manipulative, informational, or attitudinal. Below are examples of performance objectives representing the three kinds of content:

Manipulative:	Using a hand-saw the student will cross-cut a board along a line not varying more than the width of the saw blade.
Informational:	Given a list of verbs, the student will construct the three tenses of each word without error.
Attitudinal:	After the course the student will indicate a positive attitude toward music by voluntarily participating in a music club or organization such as orchestra, band, or glee club.

Identifying Acceptable Performance Objectives

A fellow teacher asks you to critique his objectives.

Place a check by the number of acceptable performance objectives below.

_____ 1. The student will correctly list names of all the engine components included in auto tune-up without reference to any manuals or visual aides.

_____ 2. To demonstrate the correct procedure for assembling a Holly carbureator.

_____ 3. When given written examples of contracts, the student will identify the valid and void contracts with 80 percent accuracy.

_____ 4. Given written examples describing land use, the student will identify the uses which violate floating zone and sinking zone ordinances.

_____ 5. Given examples of acceptable and unacceptable soldered connections, the student will correctly identify acceptable connections as per shop manual.

Items 1, 3, 4, and 5 should have been checked as they contain all necessary elements. Item 2 does not specify the student or the conditions. It may describe what the instructor will do, and not what the student is expected to achieve.

Writing Performance Ojbectives

Below is a topic to be covered in class. Write an objective in the informational domain for the suggested topic.

1. Understand the differences between a valid contract, void contract, and voidable contract.

_____

_____

_____

Check you answer. Does it specify who is to perform? Does your answer describe an observable behavior and specify the conditions, if any, under which the behavior is to occur? Have you specified standards? Also, does your objective describe an intellectual skill such as being able to choose, recall, compare, describe, or give an example of the differences between contracts?

Writing Performance Objectives

Write a manipulative objective for the topic below:

2. Driving an automobile.

_____

_____

_____

Check your answer to determine if it contains the four components. Also, your objective should specify a manipulative skill, such as applying the brake, parking, using hand signals, etc. Your objective is not acceptable if it describes an intellectual skill such as: describes, discusses, lists, etc.

WRITING PERFORMANCE OBJECTIVES

Write an attitudinal objective for this task.

3. Attitude toward library research.

Check for the necessary components. Did you specify the standards, that is, how you will evaluate attitude?

Attitudinal behaviors could be:
voluntarily uses library; encourages others to use library; spends spare time in the library; volunteers to do a research assignment in the library, etc.

Summary

The planning of instruction is probably one of the most important activities that the instructor does with regard to the total teaching process. If instruction is carefully organized and planned to meet specific needs learning will be facilitated. Individuals may be exciting and interesting presenters, but if the presentation lacks organization along with a logical and psychological sequencing of learning tasks, effective learning may not take place. For these reasons, this unit was designed to help you recognize and prepare performance objectives for use in your own classroom.

There is need for higher-level objectives such as those requiring problem-solving application and analysis, rather than those requiring recall or memorization alone. If you are interested in these different types of objectives, refer to Bloom's Taxonomy (see References.)

To find out how much you have learned, take the Progress Check on the next page. Good luck!

PLANNING INSTRUCTIONAL OUTCOMES

PROGRESS CHECK

Unit 5

1. A teacher new to your institution comments that preparing instructional objectives is a waste of time. Can you think of at least three reasons to refute this observation?

2. Below are a number of statements from someone's course outline. Place a check beside the number of each item which specifies it is the learner who is expected to meet the instructional objective:

   a. Review the essential elements of an equation.

   b. Each member of class will translate the Spanish poem.

   c. To cover the theory of "evolution."

   d. The student can take dictation from a dictating machine.

3. You would like to help a friend write some good objectives. Place a check by the objective which describes observable behavior on the part of the student:

   The Student Will:

   a. understand the notion of primary and secondary sources.

   b. inform another student of his interest in participating in extra-curricular activities

   c. learn about the principle of Ohm's Law.

   d. name the current congressional leaders.

4. You are preparing an examination from a list of objectives. Place a check by the objective which contains an explicit statement of given test conditions:

   a. When reading a 200 passage, the student will record it using Gregg shorthand making no more than 10 errors.

   b. Given a list of mixed numbers the student will convert them to improper fractions.

   c. The student will identify with 90 percent accuracy simple and complex sentences given a set of illustrative sentences.

Progress Check (Cont'd)

5. Below are some topics which might be covered inclass. Select one topic only and write three different objectives for it: a) one in the informational domain, b) one in the manipulative domain, and c) one in the attitidinal domain. (Place a check by the topic of your choice.)

Topics

_____ a. Driving Safely

_____ b. Effective Communication

_____ c. The Korean War

_____ c. Primary and Secondary Colors

_____ e. Engine Assembly

Informational:_____

Manipulative:_____

Attitudinal:_____

6. Plan the first hour's instruction of a class:

1) Write the performance objectives.

2) Organize your presentation.

3) Plan to evaluate student achievement for each objective.

PLANNING INSTRUCTIONAL OUTCOMES

SCORING KEY

1. Some reasons are:

   -The student will know what is to be learned.
   -The instructor will know what is to be achieved.
   -The instructor can evaluate student progress.
   -Instructional effectiveness can be evaluated.
   -Provides basis for selecting materials and methods.
   -Assists in writing tests or measuring instruments.
   -Leads to better organization of learning activities.

2. b and d.
3. b and d.
4. a, b, c.
5. To check your objectives, ask a colleague to examine them and decide:
   -Do your objectives describe observable behavior on the part of students?
   -Does the informational objective emphasize new knowledge, concepts or application of principles?
   -Does the manipulative objective stress psycho-motor skills or manual dexterity?
   -Does the attitudinal objective show expression of interest or positive feelings toward a subject, idea or activity?
6. If you carried out your lesson, it should be more effective for having planned it so carefully. Try it and see!

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HOW TEACHERS CAN CAUSE LEARNING

UNIT 5

HOW TEACHERS CAN CAUSE LEARNING

UNIT 5

INTRO-DUCTION

A student commented that she once had a teacher who dwelled upon what not to do with an accident victim. When confronted with the real situation, she found herself helpless--all she could remember was what she shouldn't do.

This unit tells fifteen things you should do to improve your teaching. After this unit, you should be able to tell what instructors can do to increase students learning, and to increase students' satisfaction with the learning process.

OBJECTIVE:

Apply principles of learning.

SELECT OBJECTIVES

From the last unit you learned how to write goal statements or objectives. Stated plainly, these objectives tell what you want your students to be able to <u>do</u>, after instruction. These objectives or "do statements" may be simple recall:

. . . can recall the steps in applying a tourniquet,

or they may be more complex student behavior:

. . . expresses displeasure when human characteristics are attributed to things not human in nature films.

WHY IMPORTANT

Why are the objectives, or "do" statements so important? It is because all the learning principles which you may wish to apply in your teaching require that you first decide on your objectives. To illustrate, let's look at the first learning principle:

1. PRACTICE

> 1. Give Students Practice
>
> Your students are more likely to learn if they engage in <u>active appropriate</u> practice.

Appropriate practice refers to practicing the behaviors described in your objectives. Depending on your objectives, you may need to give practice at answering questions, organizing information found in readings, performing laboratory procedures, performing on-the-job, etc.*

How much practice should be given?

2. DISTRIBUTED PRACTICE

This brings us to the second principle of learning:

> 2. Provide Distributed Practice
>
> Appropriate practice, distributed over time, produces more learning than practice all at one time.

Practice may be either massed, requiring long practice periods, or distributed, requiring a succession of shorter practice periods with rest or other forms of activities spaced in between.

Almost all the research shows that distributed practice is more effective than massed practice.

During massed practice both boredom and fatigue reduce attention and motivation.

3. FEEDBACK

While the students practice, they should quickly be told how well they are doing. This is called feedback, and gives us the third principle of learning:

* Sharing these objectives with your students can focus and motivate practice efforts. It can also show the students you have planned for, and care about what they learn.

3. Provide Immediate Feedback

As the student practices, provide immediate feedback about specific acts; praise close approximations of the new skill.

After giving your feedback, allow the student to practice again as soon as possible. Next critique the entire practice session, keeping the tone of the critique positive and factual. Tell what was done correctly; tell how to improve any other performance not done correctly.

These three basic principles of learning apply regardless of whether you teach through lectures, discussion, demonstrations, or individualized instruction. They apply whether you choose to teach concepts, principles, or skills.

OBJECTIVE

Apply principles to speed learning and increase retention

MEANINGFULNESS

Meaningful material is more rapidly learned than meaningless material; it is also remembered for longer periods of time.

Meaningfulness consists of students being able to grasp relationships between facts, generalizations, rules and principles for which they see some use. Thus, the introduction of any kind of organizing principle or framework is likely to result in far more learning and retention than communication of unorganized facts. Relating explanations to what students already know will increase the meaningfulness of the explanations.

TEACH CONCEPTS

Another way to increase meaningfulness is to select objectives which involve relationships. Instead of objectives requiring only recall of facts, select objectives involving concepts, or principles, or problem solving.

4. Teach Concepts

Select objectives wherein students form general ideas from particulars.

DEDUCTIVE VS. INDUCTIVE

Two basic ways to teach concepts, the deductive and inductive approaches, can be used separately or in combination. The deductive approach, consisting of a definition followed by examples, is most useful when there is a limited amount of instructional time. The inductive approach, in which the teacher presents (or students are allowed to find) examples which are followed by a definition, often involves students in the discovery of the definition.

CONCEPT LEARNING

To provide the most effective practice for concept learning, have students discriminate examples from non-examples. Whenever possible, present examples and non-examples that vary on only one property at a time. Note the following example of concept teaching:

Directions: Check the animals which are vertebrates:

a. ____whale
b. ____horse
c. ____worm
d. ____pig
e. ____bird
f. ____man
g. ____fish
h. ____wolf

5. Teach Principles

A principles states a relationship between classes of events which enable us to predict, infer, control, explain or find solutions to problems.

For example, most educators are familiar with the principle: If you reward behavior, it is likely to reoccur. The most important fact to remember when teaching principles is that students will learn best if they have the opportunity to practice by applying the principle to new situations.

TEACH PROBLEM SOLVING

6. Teach Problem Solving

In problem solving, the student develops the higher order principle(s) himself and is not guided directly to the solution as is frequently the case in principle learning.

Acquainting the student with the following stages of problem solving will help him to attack problems in a logical manner:

1. Formulate a problem, i.e., desribe its nature and elements in the form of a question. For example, how can a fire be lit without matches?

2. Search for solutions, i.e. collect information from many sources. Develop a list of feasible alternative solutions.

3. Evaluate potential solutions and select from among them the one(s) that are apt to yield the greatest benefits for the investment of resources and that are most likely to succeed.

4. Implement and evaluate solutions. Try out the most feasible solutions. See how well each solution enables the problem solver to reach his goal.

INCREASING MEANING-FULNESS

Principles 4, 5, and 6 have to do with the objectives you select. There are other ways of increasing meaningfulness for the student:

1. Using examples which relate to the experiences of your students.

2. Allowing capable students to have as much say as possible in many of the decisions that affect them and their learning.

3. Explaining what future use students might make of the course content.

* *

PERCEPTUAL MOTOR SKILLS

Teaching perceptual motor skills poses special problems.

Early in the instruction, you will want to provide the student with the following:

1. precise, unambiguous objectives.

2. an overview of the task by means of a demonstration or audiovisuals.

3. If possible, some form of brief guidance to minimize erros, such as "talking through" the procedure.

PROVIDE CUES — As the student learns the task, help should be given to discover cues that will make learning the skill easier. For example, a swimming teacher might say, "Your hands should be shaped like a cup." Withdraw external cues gradually as the student gains more experience.

PROVIDE FEEDBACK — Use immediate feedback to the student to shape behavior in the desired direction.

PRACTICAL EXERCISE

Practical Exercise

1. If a psychologist taught that "four hugs a day" would keep marriages healthy, is he teaching a concept, a principle, or problem-solving? Look back over the last few pages to help you decide.

* * * * * * * *

ANSWER

He is saying that if you do one thing, another thing will result. Therefore he is teaching a principle.

PRACTICAL EXERCISE

2. The instructor marks all the correct examples on student's worksheet. What principle is being applied?

* * * * * * * *

ANSWER

We would say that the instructor is providing feedback, so the student will know what the correct performance is.

INFLUENCES ON LEARNING

MOTIVATING STUDENTS

Community college students seek the same rewards as all workers, whether executives or day laborers. The chart which follows shows how instructors can design instruction so that students can have their needs met. Students will work if you help them meet their needs. Motivation is something which you can design into your instruction.

How to Improve Motivation

CURIOSITY

1. Curiosity

People seek and enjoy stimuli which are different from those they are accustomed to. But these stimuli must not be too novel. Too much novelty produces anxiety rather than curiosity. Implications of this for teaching include asking many questions, particularly unanticipated questions, and pacing learning so that each step offers some newness and only a moderate risk of failure.

SUCCESS

2. Success

Many community college students anticipate failure and withdraw when failure occurs. Therefore, it is particularly important for them to experience success, especially on early classroom assignments. All assignments should be carefully prepared so that success is possible with reasonable effort. When all students must reach a certain level of competency in a subject area or skill, as in the case of a dental hygiene student, you can provide for success by letting students work at their own pace without penalty. When a certain level of competency does not have to be reached, you may want to assign tasks of varying complexity so that each student has an opportunity to achieve at a maximum level.

GRADES

3. Grades

Grading standards should be clear.

GRADES

3. Grades (continued)

Since grades are primary motivators for some college students, instructors should connect grades to the kind of learning they desire. If grades are based on memorization, students will memorize; if grades are based on the ability to integrate and apply principles, students will attempt to do so. Also, grades should mainly be used as a positive incentive, not as a threat. Research shows that using grades chiefly as a threat may produce avoidance and withdrawal rather than interest. If an A, B, C system is used, students should be told that if they all perform to "A" standards, then all will receive an "A." Use of a grading curve reduces motivation.

DECISION MAKING

4. Participation in Decision Making

Allowing capable students to help make decisions that affect them and their learning should increase their motivation to succeed in your course. Whenever possible, allow students to choose from among course or lesson objectives; at least let them have a say in the way they reach the objectives.

RECOGNITION

5. Recognition and Social Relationships

You can raise the motivation of many of your students if you fill some of their needs for recognition and social relationships. Try to get to know each student. Without discouraging low achievers, provide recognition for good achievement. Encourage friendships between students by permitting students to work in groups occasionally.

APPROVAL

6. Approval

Giving verbal or non-verbal praise to students who are doing their best will go a long way towards motivating students. Try to avoid focusing on students' mistakes, but when you must, point out mistakes in a positive, non-threatening manner.

CONFIDENCE

7. Confidence

Students should be assured that they all are capable of learning, although not at same rate or by identical techniques.

PRACTICAL EXERCISE

An expert reading tutor once said, "I simply work with the child until I find something I know the child can read. I ask him to read it, and work from there." What motivation procedure is he using?

ANSWER

Since the tutor wishes to assure that the student performs correctly, we would say that she/he is using success as the motivator.

COMMUNI-CATING

Communicating with Students

Students want your close attention, interest, and respect. They also are quick to detect insincerity. The following recommendations are not made to help you pretend concern which you do not feel. Instead, they show ways by which you can make yourself accessible to students. If you care about your students, about their learning and growth, then these recommendations will help you communicate your concern to them.

PERSONAL CONTACT

1) Personal Contact

Your initial communication with students, both verbal and non-verbal, will seriously affect the level of rapport that is established. Take time at the beginning of class to get to know students, perhaps through written or oral descriptive statements. Learn their name. Do not be afraid to share some of your real self with students. Scheduling a number of individual conferences throughout the semester also goes a long way towards establishing personal contact and letting students know that you care.

ATTENTION

2) Attention

Encourage students and show your interest in them by both non-verbal and verbal attending. Whether in a classroom or conference, face students, maintain good eye contact, lean or step towards students when they are talking, remain relatively relaxed, listen carefully to students verbal and and non-verbal messages, and actively communicate your understanding and warmth through techniques such as paraphrasing and positive reinforcement.

If you are distracted while talking with a student or the class, say so. Perhaps you can give them the reason for your distraction. You may need to withdraw to deal with the problem. Return when you can give your full attention.

VERBAL COMMU-NICATION

3) Verbal Communication

Students will feel respected if you work to understand them--their feelings, experiences, behavior, and needs. Merely understanding is not enough; you must communicate your understanding. One way to do this is to paraphrase the feelings you observe and the experiences expressed by the students. To paraphrase, respond to students with words that are similar to theirs or which reflect their feelings. Paraphrasing communicates empathy and encourages students to explore their feelings at a deep level.

Spend far more time building on student strengths than on weaknesses. Refrain from critical judgements, putdowns, and unsolicited advice-giving. Such behavior will block communication between you and the students and will lessen desires to achieve success.

HOW TEACHERS CAN CAUSE

LEARNING

PROGRESS CHECK

UNIT 5

Mark each alternative below to show what learning principle from the list on the right is represented.

The Instructor:	Learning Principles:
_____a. shows how to perform a calculation; asks students to try one.	A. Give Practice B. Distribute Practic C. Give Feedback D. Teach Concepts E. Teach Principles F. Teach Problem Solving
_____b. teaches what the word "metaphor" means by giving examples.	
_____c. asks students to state a definition learned last week.	
_____d. asks students to prepare a brief visitor's guide with "do's and don'ts" for tourists going to Tasmania.	

2) A teacher gives an assignment and asks students to report individually when they are ready for an oral quiz. What motivating procedure is she/he using?

3) Student answers question correctly with author's name, but mispronounces it. The teacher says: "Good..... .You know which author wrote that." What motivation procedure is he using?

3. Another teacher says he overheard students refer to him as cold and distant. He asks for your help. What are two specific suggestions you might give him?

HOW TEACHERS CAN CAUSE

LEARNING

SCORING KEY

UNIT 5

1. a. A. Gives practice

   b. D. Teaches concept

   d. B. Distributes practice

   d. F. Teaches problem solving

2. Participation in decision making

3. Approval

4. Any two:

   a. Increase personal contact (individual conferences, learning students' names, telling anecdotes about your attitudes about the course content, etc.)

   b. Attend closely to students (give eye contact, listen closely, nod to show understanding, etc.)

   c. Communicate verbally to show understanding (paraphrase what students say or feel, acknowledge experiences and emotions of the students.)

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GROUP METHODS OF INSTRUCTION

UNIT 6

GROUP METHODS OF INSTRUCTION

UNIT 6

INTRODUCTION

OBJECTIVE	° Name factors to consider before selecting instructional methods and materials.

FIVE GUIDELINES

Before choosing methods and materials for a learning unit, an instructor will want to consider these five guidelines:

DEFINE OBJECTIVES

1. Define both general and specific learning objectives. What should learners be able to do after instruction that they could not do previously? Write a separate behavioral statement for each desired learning outcome. Behavioral objectives are useful for large groups, small groups, and individualized instruction.

ANALYZE LEARNERS

2. Analyze your learners. An instructor's instructional strategies should be flexible and comprehensive enough to facilitate learning for each pupil. Suggestions for analyzing learners include cognitive mapping, reading tests, and pre-tests before each major learning unit.

ANALYZE YOURSELF

3. Analyze yourself to see which methods feel most comfortable. College teaching is often mistakenly equated with lecturing. Experiment with other methods suggested in this module; you can always present necessary information through a combination of methods.

MATCH OBJECTIVES WITH METHODS AND MATERIALS

4. Match the desired learning specified in your objectives with the most suitable methods and materials. Most successful instructors probably vary their teaching methods to suit their objectives. A few common sense rules apply here. Teach motion with motion, e.g., teach fire fighting with a film. Students need to practice doing skills correctly if they are to retain them. Active learning is more efficient than passive learning. Lectures are vague for presenting information; discussions are good formats for practicing higher level thinking and for changing attitudes. Beyond these guidelines, you will often have to rely on common sense and guesswork.

ANALYZE CONSTRAINTS

5. Analyze constraints These include time, money, space, availability of materials and equipment, and so forth. You will often have to settle for your second choice method or material because constraints render your first choice impractical. Or you might find your objectives won't fit in the space of time to achieve them.

EXAMPLE

Mrs. Alpert's objective for her next Humanities class is for students to write a personal definition of creativity. From previously analyzing her class through reading tests, she knows that more than half of her students are poor readers. She also knows that both lecturer and discussion leader are comfortable roles for her. With all this information in mind, Mrs. Alpert decides to present several audio and visual experiences in class, such as a film she is familiar with, music, a talk accompanied by slides, and a short discussion, at the end of which she will ask students to write a personal definition. As for constraints, Mrs. Alpert learns that her first choice film cannot be ordered in time for her class. Deciding that the film is worth waiting for, she alters the date of the class on creativity.

EVALUATING THE SUCCESS OF METHODS AND MATERIALS

After implementing the methods and materials that you have selected, you will want to test your students orally or in writing to measure both how much they have learned and the quality of your instruction. Once you have your test results, determine how well these results show achievement of the objectives. You will want to make judgements about revising your instruction for its next implementation. Written or oral student opinionnaires might offer another guideline for revision. Most instruction needs to be revised a few times before it is maximally effective.

Practical Exercise:

Imagine that you are getting ready to teach a class next week. You must prepare for the first two hours of instruction. Name four factors you should consider before selecting your teaching methods:

1.

2.

3.

4.

ANSWER

You might have said "the objectives", "my students", "my own preferences", or "constraints which exist".

Lectures

OBJECTIVES

- Identify good uses of lectures.
- List two advantages of the lecture method.
- Suggest two ways to actively involve students in lectures.

RECOMMENDED USES

Lectures can be used to:

1. Introduce a new topic
2. motivate and arouse
3. integrate-summarize
4. cover complex material
5. share new research findings
6. share an instructor's personal experiences
7. provide enrichment experiences such as guest speakers, films, and demonstrations.

ADVANTAGES OF THE LECTURE METHOD

The advantages below help explain the widespread use of the lecture:

1. It is economical in terms of classroom time, cost, and student numbers that can be handled.

2. It can provide exposure to knowledge not readily found in assigned readings or in the common experience of students.

3. It is helpful for introducing a new topic of study by providing background material that students will need to prepare them for further study.

4. It is a good vehicle for summarizing.

5. It uses the least amount of energy to deliver it.

DISADVANTAGES

An instructor will want to be familiar with the following disadvantages of lectures. Some of these can be remedied by inserting questions in the lecture or holding discussions at the end of a lecture which are clearly related to past experiences of the learner.

1. A lecture tends to be a one-way process which places students in the passive role; thus it is difficult to measure student learning and/or interest (at least during the lecture).

2. A lecture "forces" all students to learn (or turn off) at the same pace, regardless of their abilities.

3. It places at a disadvantage students who do not listen or take notes well. It should <u>not</u> be used for the entire time in long classes.

4. It is an inadequate method for facilitating certain types of learning, particularly problem solving, skills, and attitudes. It is not likely to lead to achievement of higher level objectives, such as application, analysis, synthesis or evaluation.

BEHAVIORS OF A GOOD LECTURER

A good lecturer:

1. Obtains the attention of the audience at the start.

2. Makes the objectives of the lecture clear at the beginning. (Might list objectives on chalkboard or handout)

3. Follows an observable organizational pattern, e.g., 20% telling what will be told, 60% telling, and 20% telling what was told.

4. Tries to have about 3 major points per lecture, since this is all people are likely to remember.

5. Indicates the relationship of one subtopic to another.

6. Incorporates examples to illustrate new concepts.

7. Provides for repetition of main ideas in varying ways.

8. Checks to determine where the listeners "are" in regard to the material presented by asking frequent questions to see if students understand.

9. Accompanies the lecture with audiovisual aids and printed handouts which structure or guide the listener to key points. These may be used to prompt or focus the learner's attention.

10. Pays attention to these public speaking points:

    a. varies pitch and volume
    b. looks at audience
    c. avoids stereotyped behaviors.

11. Projects warmth, friendliness, confidence, and enthusiasm for the subject.

12. Uses humor, when applicable, to create a warm atmosphere and to refocus attention.

13. Allows for audience feedback through paraphrases and questions.

ADDITIONAL TIPS

Additional organizational suggestions for lecturers:

1. Write a brief outline on the board during the lecture. You might also hand out a printed outline.

2. Summarize important points at the end of a lecture. This also might be done by preparing a printed sheet ahead of time.

3. Since variety provokes interest, break up lectures with panels, discussions, demonstrations, outside speakers, movies, and other audio-visual presentations.

4. Break the class into rap sessions or task groups. Research has shown that a combination of lectures and discussions are more effective than straight lectures for producing comprehension and problem-solving skills.

5. Encourage students to ask questions during or following the lecture, a technique which provides continuous feedback for the lecturer and immediate clarification for the students.

6. End the session with questions worth considering in the future.

Practical Exercise:

Suppose you decided to lecture to your class for the first hour of next week's meeting.

1. Name the uses you could make of this lecture.

   a. _____

   b. _____

2. What are two advantages of choosing to lecture during this first hour?

   a. _____

   b. _____

3. How might you actively involve the students in your lecture?

   a. _____

   b. _____

ANSWER To check your answers:

a. Review material in RECOMMENDED USES

b. Review material in ADVANTAGES OF LECTURE METHOD

c. Suggestions may come from last two pages or from your own experience.

Discussions

OBJECTIVES

- Recognize the three types of discussions
- Define and give one good example of each of the following discussion leadership functions:

a. clarification of goals during the discussion
b. summarization
c. clarification of differences
d. evaluation

CLASSIFICATION

According to William Glasser, the three types of discussions are:

1. Problem-solving - concerned with trying to solve behavioral and social problems.
2. Open-ended - discussion of thought-provoking questions related to students' lives or the classroom.
3. Diagnostic - directly related to what the class is studying; its purpose is to see how well the class has understood the lesson.

ADVANTAGES AND RECOMMENDED USES

The discussion method is particularly appropriate to:

1. actively involve and challenge students.
2. give students opportunities to practice interpersonal skills.
3. gain acceptance for information, theories, and attitudes counter to folklore or previous beliefs.
4. gain prompt feedback on how well course objectives are being attained.
5. help students develop higher cognitive processes such as critical thinking and problem solving.
6. help students get acquainted with other students.

CAUSES OF FAILURE

An instructor will want to consider why some discussions fail before implementing this strategy.

1. Discussion is easier for bright or fairly bright students than for less able students. If used with less able students, structure it well and summarize frequently.

2. A discussion is unpredictable, even when carefully organized. Discussions can easily go off on a tangent or become aimless, particularly when student leadership is non-productive.

3. The strategy may become "fake" if the leader has difficulty in maintaining an open mind (i.e., he knows what kind of answers he wants and will accept no others).

4. Participants may not feel confident or comfortable enough to participate.

5. It can lead to group dominance by one or several people, with the rest becoming disinterested spectators.

DISCUSSION LEADERSHIP SKILLS

The leadership functions can be classified into seven general categories: agenda setting, introducing the topic, clarification of goals, summarization, mediation and clarification of differences, encouraging participation, and evaluation. Note the following specific behaviors of a good discussion leader:

1. Plans in advance the type of discussion and key questions to be raised. For e.g., will it be limited, full, partial, one-way, two-way?

2. Arranges chairs in a circle to enhance the discussion environment.

3. Provides an initial "jumping off" activity; e.g., a field trip, reading assignment, problem to be solved.

4. Clarifies goals and keeps the discussion moving toward a productive goal; e.g., helps students to avoid diversions, points out stumbling blocks, and appraises progress.

5. Encourages student participation by reinforcing perceptive contributions, by asking open-ended and probing questions, and so forth.

6. Generally refrains from judging student responses as "right" or "wrong"; i.e., accepts students' opinions as being worthy of further critical thought.

7. Gives help at appropriate times; e.g., by rephrasing questions for the group, by suggesting that members back up opinions, by calling for or providing clarification of ambiguous contributions, by summarizing occasionally, and by supplying or referring students to missing information.

8. Uses instructional aids when appropriate; i.e., chalkboard or overhead projector.

9. Helps focus conflicts within a group so that conflicts may contribute to learning; e.g., by listing various points of view on the chalkboard.

10. Tolerates silence during a discussion. An instructor might legitimize silence by telling the class that an immediate response to a difficult question is not required.

11. Summarizes the key points of the discussion to help students see the progress made. This will probably occur several times during a discussion.

12. Evaluates with at least equal emphasis both what happened in the discussion and how it happened.

BEGINNING THE DISCUSSION

Four ways to begin a discussion which have proven successful are to:

1. present a common, concrete experience, such as a demonstration, film, or role-play.

2. pose a problem and ask students to identify as many aspects of the problem as possible.

3. ask an open-ended question that gets at relationships, applications, or analysis of facts and materials.

4. introduce a controversy by either causing students to disagree over an issue or by stating both sides of a controversial topic.

BARRIERS There are a number of barriers to class discussion that need to be avoided:

1. Lack of information: At particular points in the discussion, the instructor may need to supply information which the students cannot be expected to have and which get the discussion moving again.

2. Ambiguity: The instructor may need to restate a contribution that is unclear or ambiguous and have restatement confirmed or rejected by the student.

3. Apparent lack of progress: The instructor may need to help the class chart its progress by summarizing or restating the progress to that point.

4. Early closure by the instructor: The instructor should try to avoid telling the students the solution before they have developed some conclusions for themselves.

Practical Exercise:

1. Below are different purposes and types of discussion groups. Write the number of the purpose by each type.

TYPE	PURPOSE
___ a. Social problem-solving	1. to test
___ b. Open-ended	2. to deal with personal concerns
___ c. Diagnostic	3. to make group decisions

2. Can you give one good example of each of these during a class discussion?

a. clarification of goals _____

_____

b. summarization _____

_____

c. evaluation _____

_____

ANSWER 1. a.-3
b.-2
c.-1

Demonstration/Laboratory Methods

OBJECTIVE	° Recall procedures involved in the demonstration/ laboratory method.

RECOMMENDED USES

The demonstration/laboratory method is particularly useful when an instructor's goal is:

1. To teach skills, such as the skills involved in manipulative operations.
2. To demonstrate scientific principles and theories.
3. To illustrate movement or relationship of parts of mechanical equipment.
4. To simulate interpersonal experiences in the behavioral sciences.
5. To provide group interactions in a laboratory setting.

PROCEDURES FOR DEMONSTRATIONS

In an ideal problem-solving setting, the students or teacher pose the problem, the students gather the equipment and attempt to find the solution. The instructor serves only as a resource or guide during this scientific investigation.

When there is a desire for a demonstration by the instructor, however, (e.g., a science experiment) follow these procedures:

1. Plan:

   (a) purpose and objective
   (b) list of materials
   (c) outline of steps to be followed
   (d) provision for testing student reaction

2. Prepare:

   (a) set the stage (arrange seating, test equipment, etc.

   (b) rehearse the demonstration; check time (demonstration should not exceed 15 to 20 minutes)

3. Introduce lesson: explain purpose and process of demonstration

4. Demonstrate

5. Repeat demonstration if necessary. Invite student performance and reactions.

6. Test

DEMONSTRATION PROCEDURES FOR SKILL TRAINING

When skill training is involved (e.g., teaching a manual or technical skill) follow these procedures:

1. Plan as in #1 above. In addition, prepare a job analysis which includes a step-by-step arrangement of what to do, how to do it, and key points.

2. Prepare as in Step #2 above.

3. Introduce lesson: tell why process is important and how it will be taught.

4. Slowly review all the steps once to give student a general idea of the task to be learned. (You may want to write steps on a handout or chalkboard).

5. Demonstrate steps slowly, explaining purpose of each step and relationship between steps. If students are beginners, you may want to do this twice. Discuss points of safety and give small amounts of key information and theory as you demonstrate. Use audiovisuals when needed, for instance, to enlarge small parts so that they can be seen.

6. After each part or major step of a demonstration, ask questions on key points of each step and the relationship between steps.

7. Provide repetition, based on student needs. This might include several or all of the following:

    1. instructor repeats demonstration at a faster speed

    2. student demonstrates

    3. instructor demonstrates using variations

    4. students explain procedures -- how and what to do.

8. When learning skills, the learner should be guided through an initial correct and successful performance. Often this consists of assigning work to students, getting them started, and then correcting any errors or providing additional instruction on an individual basis. No students should be allowed to practice incorrect methods.

9. When learning skills, the learner must practice the physical-mental steps until the process becomes automatic. Plan a schedule so that each student can practice with the equipment as soon after the demonstration as possible. Provide feedback.

OTHER POPULAR TEACHING METHODS

OBJECTIVE	° Choose one of the following methods for use in class: role-playing, discovery learning, buzz groups, simulations, and peer teaching.

ROLE-PLAYING	Usually without a script, class members re-enact problem situations in human relations. The role-playing scene is followed by group discussion which may be followed by replaying the scene using different participants in the roles. Role-playing provides a close-to-reality base for personal understanding and insight and for group discussion, problem solving, and human relations training.
DISCOVERY LEARNING OR INQUIRY METHOD	Both discovery and inquiry learning are based on inductive reasoning. After being presented with a number of examples, the learner is required to arrive at a related rule or principle.
BUZZ GROUPS	A class is divided into sub-groups, which are each given a series of questions or problems and are asked to come to some kind of resolution. After one class period or several, the sub-groups report to the larger class. At this time comments and discussion from other students are welcomed. The groups are often required to write a report on their discussion activity. Student panel discussions can be used to present information in the context of such a design.
SIMULATIONS	Simulations are activities which give students a fairly accurate feeling for a segment of the real world by mirroring real world guidelines and constraints. Sometimes simulations take the form of realistic models, such as a full-scale model of an airplane cockpit. Other times, a realistic problem is posed and students are asked to act it out and solve it. For example, students might be asked to solve an environmental problem as they play the roles of manufacturers, company executives, members of an ecology group, and concerned citizens.

PEER TEACHING

This refers to techniques which utilize students to help other students learn. Two such techniques are described below:

a. Teacher of the Day - Students are divided into several small groups. On a given day, one of the group members in each group teaches the same topic. To insure that quality instruction takes place, the instructor should closely monitor the work of the student teachers.

b. The Learning Cell - Students are divided into pairs. After reading an assignment on his own, each student prepares questions relating to the content of the assignment. The pairs take turns asking each other their series of questions. The instructor should collect carbon copies of questions and give students feedback on the adequacy of their questions. To help maintain interest, pairs should be rotated periodically.

Practical Exercise:

1. Select two teaching methods listed below which you would be willing to use in the future. Explain why you prefer them:

___ a. Demonstration/Laboratory

___ b. Role-playing

___ c. Discovery Learning

___ d. Buzz Groups

___ e. Simulation

___ f. Peer Teaching

ANSWER

Hopefully, you selected two which you honestly plan to use in the near future, and will be useful for achieving your objectives.

SUMMARY

To find out how well you've done, take the Progress Check on the next page.

GROUP METHODS OF INSTRUCTION

PROGRESS CHECK

Unit 6

1. Mr. Jones is getting ready to teach his class and is planning his methods for the first few hours. He considered the following:

   a. his students

   b. his own preferences

   c. constraints which exist in his college

   What one thing did he forget to consider?

   d. _____

2. Mr. Jones wants to give a brief lecture at the beginning to motivate his students to accomplish the objectives. How might he involve students:

   a. during the lecture _____
   _____

   b. at the close of the lecture _____
   _____

3. Match the reason for meeting with the type of discussion group held:

REASON	GROUP
___ a. to orally test what students know	1. social problem-solving
___ b. to select best plan for action	2. diagnostic
___ c. to express one's personal feelings	3. open-ended
	4. agenda-setting
	5. motivational

GROUP METHODS OF INSTRUCTION

Scoring Key

1. the objectives of the lesson

2. during the lecture: by asking students to answer questions, by letting students interrupt to ask questions, by breaking into buzz groups or a rap session to solve a problem.

   at the close of the lecture: same as above or by following lecture with peer teaching, role-play or simulation.

3. a. - 2
   b. - 1
   c. - 3

4. Any method you chose is fine, assuming you were honest and will attempt to use it in the near future. Good luck!

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INDIVIDUALIZED INSTRUCTION

UNIT 7

INDIVIDUALIZED INSTRUCTION

UNIT 7

INTRODUCTION

ADVANTAGES

Individualized, or personalized instruction, has become increasingly popular in the last decade. This is partly because student motivation tends to rise rapidly when individualized instruction is used. Individualized instruction may take numerous forms, several of which are discussed in this section. In addition to personalization, individualized instruction often implies that each student may assume some responsibility for his own learning, and thus:

1. become a more independent learner.
2. learn at a pace which is comfortable for him.
3. learn through materials related to his perceptual strengths.
4. learn on a level appropriate to his ability.
5. learn in accordance with his own learning style (alone, in a small group, through media, and so forth).
6. be graded in terms of his own achievement, not in comparison with others.
7. feel a sense of achievement.
8. select options from a series of alternatives: participate actively in decision making areas of the learning process.

OBJECTIVE • Define mastery learning

MASTERY LEARNING

Mastery learning, the concept that one unit must be learned thoroughly before the next unit in the sequence is tackled, is a close companion to modular instruction. Ideally, when an instructor uses mastery learning, 90% or more of his students can earn "A's" because they are given sufficient time and appropriate kinds of help. Thus, grades and time limitations become markedly less important when mastery learning is utilized.

Mastery learning is a critical missing link in the education of low achievers. Students are not forced to rush along with the rest of the class. Moreover, since everyone is expected to do a high level of work, "poor" students learn that they are capable of doing quality work.

Self-Instructional Packages

OBJECTIVE	• Recognize examples of self-instructional packages

POPULARITY

The use of self-paced self-instructional materials is probably the fastest growing trend in education. In a 1974 study, three-fourths of the community colleges sampled reported some use of self-paced learning modules. According to Cross, community college administrators gave modular instruction in one form or another such a high vote of confidence, that it is likely to be here to stay.

UNIQUE FEATURES OF PACKAGES

The smallest block or chunk of instructional time is converted into a package of material which teaches students in the absence of the teacher. Self-instructional packages are characterized by these features:

1. Clearly and explicitly stated objectives.
2. Post-tests at the end of each unit with a scoring key to measure student achievement.
3. Practice exercises throughout the material, followed immediately by feedback to the student or the correct responses.
4. Usually 30 minutes to one hour in length.
5. Materials are guaranteed to succeed, with or without the presence of the producer. They are field-tested and revised until the objectives are met.
6. May be multi-media in approach. Any medium or audio-visual aid can be incorporated, yet will work with just the printed page.
7. Can be designed for two persons, small and large groups, or an individual.
8. May be used within any larger system of instruction, traditional or non-traditional.
9. Flexible. Packages can be arranged in any sequence desired. Each can be a self-contained unit or part of a series.

10. Exportable. Can be shared by many teachers in different locations.

11. Replicable. Guarantees same results with groups of students similar to those for whom the package was designed.

USE OF PACKAGES

Packages of material may be used in different ways:

1. To replace, supplement, or complement traditional instruction.

2. For remedial work or enrichment with slow or fast learners.

3. Prior to a lecture, instead of a lecture, or as follow-up to a lecture.

4. To stimulate thinking before a discussion so students are informed. To structure a discussion without the teacher being present. To expand on a discussion after it is held.

5. Mailed or sent home as study material.

6. Left in lecture halls, laboratories or shops, for students to take if interested. May be distributed during class.

7. Used as correspondence courses. Used in homes via radio, newspaper or as Educational Television (ETV)

8. Sold in bookstores or distributed free in libraries, learning centers, churches, hospitals, or prisons.

9. Distributed by instructors, secretaries or teaching assistants.

TYPES OF PACKAGES

To meet the definition of a well-designed self-instructional package, it must actually teach and include: clear objectives a post-test,practice exercises and frequent feedback.Examples follow. Some of these will be described more fully later.

Description		Examples
Workbook or printed, illustrated materials	-	Commercial or teacher-made programs.
Textbook with chapters broken into packages	-	PSI (Personalized System of Instruction)

TYPES OF PACKAGES (cont'd)	Description	Examples
	Slide-tape or Audio-tape	- AT (Audio-Tutorial)
	Videotape	- VTR (Video-Taped Response systems
	Films or filmstrips	- Driver's Ed. films
	Computer programs	- CAI (computer-assisted instruction)
	Multi-media packages	- Tape-controlled discussion with illustrated workbook.
	Field-trip package	- Tape-controlled walk through a geologic site.

Practical Exercise:

Below is a list of some classroom materials and handouts. Check those that might meet the definition of a self-instructional package (if it included all the correct characteristics):

___ a. filmclip

___ b. syllabus

___ c. course outline

___ d. workbook

___ e. tape-controlled lesson

___ f. textbook

ANSWER

You were correct if you selected a, d, and e. A textbook sometimes is a collection of small packages (for example, 10 one-hour units can be bound together as chapters in a book.) Traditionally, however, it is too long and not designed like a self-instructional unit.

Modules

OBJECTIVE	° Differentiate between self-instructional packages and self-paced modules

DESCRIPTION OF A SELF-PACED MODULE

A module takes longer to complete than a package. It may take weeks or months of instructional time. Typically it does not do the teaching. It tells the students a) what they will learn (objectives)

b) how the material will be presented (learning options)

c) in what way they will be evaluated (evaluation procedures)

Many modules serve as guides to more effective instruction. For e.g., they might suggest that the students attend a lecture, see a film, work through a multi-media package, or do an experiment.

GENERAL CHARACTERISTICS

While learning modules vary a great deal they do share some characteristics. They have well-defined learning objectives and use commercially or teacher-prepared learning materials. They have a suggested sequence of activities and provisions for evaluation. Students may use the modules independently with instructor assistance. Students may proceed at their own pace, and may work on modules instead of or in addition to attending regular class sessions.

Practical Exercise:

A friend asks you to assess some instructional materials produced by his department. He shows you a list of objectives, a description of learning opportunities, and an outline of evaluation procedures for the course. What are you dealing with?

___ a. multi-media packages

___ b. course outline

___ c. topical sequence

___ d. learning modules

___ e. self- instructional packages

ANSWER We would say (d) learning modules.

Personalized System of Instruction (PSI)

OBJECTIVE	• Recognize common features of PSI and the audio-tutorial method. • Differentiate between PSI and AT methods

DESCRIPTION

Personalized System of Instruction (PSI), an increasingly popular learning system of individualized instruction, is based on self-paced modules and mastery learning. PSI is characterized by the following components:

1. Clearly and explicitly defined objectives.
2. The stress is on the written word. Textbooks and other readings, supplemented by instructor prepared study guides, are the standard learning materials.+
3. The course is divided into small learning units, either chapters or, in some cases, sub-chapters.
4. Lectures are optional and are used for motivation rather than for transmitting necessary information.*
5. Mastery learning is essential. Students must pass a unit test before they can proceed to the next unit. Ideally, students are given a reasonable number of unpenalized chances to demonstrate mastery.
6. Immediate reinforcement is important -- students' tests are corrected soon after they are taken.
7. Student proctors, usually undergraduate students who have completed the course, are used as peer tutors. This emphasis on the peer tutoring aspects of learning distinguishes PSI from many other system of individualized instruction.
8. Self-pacing is allowed, although individual time limits should be arranged between the student and the instructor in order to avoid problems of serious procrastination.

+ It should be noted, however, that increasing use is being made of audiovisual aids in many PSI programs.

* In some programs, students "earn" the privilege of attending lectures by mastering predefined objectives first.

ADVANTAGES AND DISADVANTAGES

In the last few years PSI has grown rapidly in almost all subject areas, especially in psychology, science, and engineering. Research has demonstrated that students in PSI courses perform better, retain more, and are more enthusiastic than students in comparable traditional courses. However, PSI is not without its potential problems, procrastination chief among them. Community college students who have not experienced success in school-related tasks may be especially likely candidates for problems with procrastination and withdrawal. Orientation can help avoid this.

Audio-Tutorial (A-T)

DESCRIPTION AUDIO-TUTORIAL

The audio-tutorial approach is another of the many systems of individualized instruction which build heavily on self-paced modules and mastery learning. Developed by Dr. S. N. Postlethwait at Purdue University in the early 60's, the audio-tutorial learning system has three components: independent study sessions, the general assembly, and integrated quiz sessions. Specific characteristics of this approach are listed below:

1. The independent study sessions take place at a Learning Center which is open during the day and evening; students work at their own pace and convenience at individual study stations.

2. Objectives for each lesson are well-defined.

3. Emphasis is on multi-sensory learning and on providing for different learning styles. Learning stations in the center are equipped with various media, such as specimens, equipment, readings, audiotapes, filmstrips, and workbooks.

4. When working in the Center, students are tutored by an audiotape of the instructor as they participate in <u>active</u> learning.

5. The general assembly meets once a week and is used for activities best conducted in a large group: guest lecturers, films, and demonstrations. Attendance is usually optional. Purposes are to introduce, review and motivate.

DESCRIPTION AUDIO-TUTORIAL -continued-

6. The integrated oral quiz session takes place once a week in small groups consisting of 6-10 students and an instructor. Each student prepares an explanation of each objective; these are discussed among the group. Such oral testing combined with discussion enables students and instructor to develop closer relationships.

RESEARCH

Considerable research has been conducted on the audio-tutorial method, and there is plenty of evidence that students learn well from the method and that students prefer this approach to traditional lectures. Audio-tutorial is beginning to have some impact on community college teaching.

SUMMARY

Since both the audio-tutorial method and PSI are based on self-paced modules and mastery learning, the two methods have much in common: objectives, self-pacing, mastery learning, small learning units followed by tests, and an increase of student responsibility for his own learning. Often instructors who use one of these learning systems, such as PSI, will combine aspects of other learning systems.

Practical Exercise:

Below are some features of well-known systems of instruction. Match each feature with a system.

Feature	System
___ a. controlled by tape	1. PSI
___ b. controlled by computer	2. AT
___ c. controlled by textbook	3. CAI
___ d. controlled by videotape	4. VTR
___ e. controlled by television	5. ETV
	6. AVI

ANSWER a-2, b-3, c-1, d-4, e-5.

Contract Learning

OBJECTIVE • Describe procedures for avoiding procrastination

CONTRACT LEARNING

Contracting with each student for how much work to do in the course is another popular method of personalizing instruction. While contract learning is likely to include objectives and some form of evaluation, contract learning may or may not incorporate mastery learning, self-pacing, and a large degree of independent learning. In this model, each student contracts with the instructor for the number of projects, exams, and classes to be completed. The contract may be the joint effort of a student and the instructor, or the instructor may present a contract which clearly specifies the amount of work and types of activities that are expected for different grades. In the latter case, students are asked to indicate within a week or so what grade they want to work for in the course.

CONTRACTS TO AVOID PROCRASTINATION

Students have difficulty sometimes in keeping up a steady pace if they are free to learn at their own rate. Teachers may want to help slower students avoid procrastinating or "cramming" at the last moment. A contract is used to establish a schedule of due dates. The student and the instructor together design a weekly calendar, showing what packages or modules will be completed by certain dates. If the contract is broken, and the schedule is not adhered to, the schedule must be renegotiated, until a more reasonable one can be established.

ADVANTAGES

The contract seems to provide some students needed structure and guidance for completing work assignments in an individualized program. Students feel committed to a program where they have control over their own rate of learning. Some students learn better on weekends, in early morning hours, late at night, or over the holidays. Students can determine for themselves their own best learning times.

Independent Study Charts

DESCRIPTION

One method for keeping track of where students are in their individualized program is to devise an independent study chart. This progress chart lists the names of all students down the left side of the page and all expected assignments or objectives to be mastered across the top of the page. As each student completes an objective or a post-test it is checked. At a glance, the teacher can see how fast the students are completing objectives.

USE

Using the chart, an instructor may identify students who are not likely to complete the course because they are moving too slowly through the material. The students and instructor should then consult with each other frequently at regular intervals, as to rate of progress. Encouraging students who show a little improvement should soon lead to a faster pace.

Practical Exercise:

You are concerned about five students who do not keep pace with the rest of the class. They miss class, don't turn in homework assignments, and don't finish their units in time for the exams. What might you do? Describe two techniques for helping them:

a. _____

b. _____

ANSWER

You might:

a. Set up a contract to complete assignments by certain dates, attend class regularly or finish readings within certain time limits.

b. Prepare an independent study chart of everyone in class. Keep track of where the five students are in relation to the rest. Consult with them frequently on progress. Reward them when they show a little improvement.

SUMMARY

For a review of information on individualized instruction, try the Progress Check on the next page.

INDIVIDUALIZED INSTRUCTION

Progress Check

UNIT 7

1. A colleague is known to be using self-instructional packages to teach her class. Which ones below might meet the definition of a package (if each unit had all the design characteristics within it?)

___ a. lesson plan

___ b. videotape

___ c. syllabus

___ d. lab manual

____e. content outline

2. The difference between a package and a module is:

___ a. they have different purposes

___ b. they cover different lengths of time

___ c. they are designed differently

___ d. they are used in different ways

___ e. all of these

3. These systems are each controlled by a different medium. Which one?

___ a. ETV

___ b. CAI

___ c. PSI

___ d. AT

___ e. VTR

1. textbook
2. television
3. videotape
4. audiotape
5. computer
6. slides
7. film strip

4. A shorthand teacher using individualized instruction complains that some of her students procrastinate. They seem to hesitate to complete each dictation assignment. What suggestions might you give her?

a. _____

_____

b. _____

_____

INDIVIDUALIZED INSTRUCTION

Scoring Key

1. videotape (b) and lab manual (d)
2. all of these (e)
3. a. -2
   b. -5
   c. -1
   d. -4
   e. -3

4.a. Use a contract system

   b. Let students check their progress on an independent study chart.

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USING MEDIA TO IMPROVE INSTRUCTION

UNIT 8

USING MEDIA TO IMPROVE INSTRUCTION

UNIT 8

Some Guidelines

OBJECTIVES	° Recognize what to do before, during and after use of media.

USE OF MEDIA

Think back to the best and most exciting learning experience you ever had as a student...Chances are several of your senses were involved. For this reason many types of media should be readily available to the classroom instructor. As defined here, the term instructional media includes a wide range of materials and equipment, ranging from models, slides and workbooks to television and computers.

The following guidelines, can be applied to the selection and utilization of most instructional materials.

BEFORE USE

Before using any media be sure to:

1. Select carefully. Decide what objectives your media have. Too often teachers use media as time fillers rather than as instructional devices.

2. If time permits, preview materials to determine what questions you will ask and what details you will emphasize. Previewing has an additional advantage--often the film or videotape you order will not be suitable for your objectives, and you may want to use only part of it or none at all.

3. Prepare students before presentation. Students will gain most if they know what to look for. You might want to prepare question and answer sheets for students to complete as they watch the presentation.

DURING USE

4. Provide for student participation by such activities as note taking, stopping the presentation to ask oral questions, and having students answer question sheets.

AFTER USE

After instruction is over be sure to:

5. Provide follow-up Activities. Follow-up activities have two major purposes: students can summarize what they have learned and the instructor can correct false information.

Practical Exercise:

You have found some slides you think might be useful to illustrate one of your lectures. Decide if the activities below should take place before, during or after instruction:

_____ a. Let students respond to the slides		
_____ b. Prepare students		1. Before
_____ c. Preview the slides		2. During
_____ d. Select your objectives		3. After
_____ e. Ask students to summarize		

ANSWERS a.-2 and 3, b.-1, c.-1, d.-1, e.-3. You might want students to answer questions about the slides both during and after instruction takes place. During instruction the activity provides useful practice. After instruction it serves as a follow-up activity for additional practice or for evaluation.

How to Select Media Wisely

OBJECTIVES
- Recognize guidelines to use in selecting media for classroom instruction.

WHICH MEDIUM TO SELECT

It has been stated that students retain 30% of what they hear, 60% of what they hear and see, and 90% of what they experience. Check with your supervisor or another faculty member about procedures for reserving and acquiring media from your local library or learning resource center.

SOME GUIDE-LINES

Some simple, easy guidelines for selection of instructional media might be helpful. Below are four found most useful:

1. Select the medium which maximizes the probability that you'll accomplish your objectives. If the objective is, "Given microscopic slides of tissue growth, the student will select those that demonstrate abnormal growth," the student must have opportunity during instruction to look at microscopic slides. Diagrams and sketches won't do since actual slides are called for in the objective. Sometimes it's not easy to tell what's needed. In that case, select several media that you think might work. Choose the one you prefer (because it's easy, quick, inexpensive, or feasible) and see if it works. If it doesn't produce good results, change it. If it does, keep using it.

2. Select the medium that utilizes principles which will improve instruction. For example, use an instructional medium which will allow learning to proceed in short steps, and can provide the learner with prompts, practice exercises and feedback concerning the correctness of the practice. Incorporating frequent relevant practice and immediate feedback in the instructional material will improve both the achievement and attitudinal responses of most students.

3. Select the medium which maximizes the probability that you will use the instructional unit. For example, many teachers prefer paper and pencil or slide-tape formats because they're easy to use for class. Utilization of video-tapes usually takes more time and technical expertise than many teachers possess. The idea is to keep media simple and easy to manage.

4. Maximize the likelihood that other teachers will be able to use the unit once it is completed. Needless to say, effective materials which are inexpensive, accessible and simple to administer or use appear to have advantages over those that are not.

SUMMARY

One best medium has not yet been proven to exist for all instruction situations and students. Therefore, you would do better to select a medium that is best for accomplishing the objectives and providing the student with short steps, practice and feedback. The medium should also be easy to produce and simple to administer so that units can be developed and used within a short time. Each unit can then be revised until its objectives are achieved.

Most Common Types of Media

OBJECTIVE	° Give examples of how you might improve instruction and heighten interest through use of media.

HEIGHTENING INTEREST

Do you sometimes wish you could vary the way you present information? You may need to add humor, movement, color or sound to your teaching. The following table is not exhaustive. It does not rule out any human or nonhuman media.

Ways to Heighten Interest

Visuals Cartoons, Illustrations, Sketches, Diagrams, Charts, Graphs, Displays, Dioramas, Timelines, Flowcharts, Photographs, Slides, Art Prints, Transparencies, Flannelboard, Chalkboard
Objects Models, Mannikins, Dolls, Toys, Food, Equipment, Machinery, Tools, Slide Rules, Musical Instruments, Animals, Plants
Printed Material Journals, Newspapers, Articles, Textbooks, Dialogues, Jokes, Stories
Activities Debates, Panels, Simulations, Role-Plays, Micro-Teaching, Dramatic Plays, Case Studies, Radio Scripts, Guest Lecturers, Experiments, Demonstrations
Students Tutors, Partners, Aides, Peers, Sensitivity Groups
Motion or Sound Audio-Tapes, Video-Tapes, Filmclips, Filmstrips, Computer Programs
Three-Dimensional Space Field Trips, Excursions, Experiments, Lab Observations

MOST COMMON TYPES OF MEDIA	Some of the more frequently selected media are described in greater detail below. Skim them to see which ones you might find useful in your own classroom:
FILMSTRIP	A filmstrip is a series of related frames of 35 mm film processed in a continuous strip. Most filmstrips are accompanied by audiotapes.
SLIDE-TAPE	A slide-tape presentation is a series of 35 mm pictures accompanied by an audiotape.
16 MM FILMS	Films have been used in classrooms for years. If your college does not own a particular film it must be ordered from a rental library several weeks in advance. Visit your Learning Resource Center for more information about rentals.
MULTI-MEDIA PACKAGES	The content is broken into small steps, the learner is required to respond actively, the learner works at his own pace, and immediate reinforcement is given. The programmed instruction format is commonly used and the material may be used by one student or a group of students. Any combination of media is utilized.
TELEVISION	Two types of television are in common use. The first is instructional TV such as the credit telecourses. Some advantages of instructional TV are that it is cost-effective, it allows students to see people, places, and events that might not otherwise be seen, and it can aid in demonstrations through magnification of parts. A second type of television is a videotape facility which can be used by an instructor to prerecord a demonstration, to record his own teaching or the reactions of his students, to provide closeup of procedures, to provide realism, to show motion, and so forth.
CAI/CMI	Computer Assisted Instruction/Computer Managed Instruction: Computers can be programmed to help students learn new materials, to review, or to do remedial work. Another use of computeres is as a management tool; so that instructors will know "where students are" at any given moment. This is particularly useful in

CAI/CMI -continued-	self-paced courses. Since computer time is expensive, computers generally should not be used when a cheaper medium will serve the purpose almost as well.
CHALKBOARD	The chalkboard is proven to be very effective. It is available in virtually all classrooms and in a unique visual aid to instruction.
OVERHEAD PROJECTOR	A portable "blackboard", the overhead projects notes and graphics which can be prepared on transparencies ahead of class or during instruction. The main advantage of the overhead is that an instructor can simultaneously operate the projector and face his students. The room does not need to be darkened when an overhead is used.

Practical Exercise:

1. Think back to when you were a student. What was the dullest, driest teaching you ever experienced? What media might have made the experience more challenging, interesting or colorful? List at least five media below:

   a. _____
   b. _____
   c. _____
   d. _____
   e. _____

ANSWERS: You might have listed any of the media suggested on the last few pages.

Making the Most of Media

OBJECTIVE	° Given a situation recognize some principles to apply when using media to maximize learning.

MAXIMIZING EFFECTIVENESS: Earlier we said a teacher should first select media in terms of objectives, should preview the material, and should prepare the students. What should a teacher do during instruction to get the students

MAXIMIZING EFFECTIVENESS -continued-	more involved? How can you use media and make the most of it?
AROUSE CURIOSITY	The first principle is to arouse, challenge, and interest your students in the information presented. To do this, you might prepare materials which arouse curiosity, depict the unusual, question the ordinary, trigger the imagination, suggest controversy, or surprise the listener.
EXAMPLES	Arousal can be triggered by posing an ambiguous, confusing, or surprising situation. Leaving students in a state of up-endedness tends to motivate students to search for an explanation or new learnings.

Some examples follow:

1. Begin a lesson with some pictures or cartoons which elicit strong emotions. Ask students how they feel about what they see. Let them know the lesson will attempt to deal with the information in the pictures, and resolve some of the feelings expressed.

2. Show a visual of an unfamiliar, strange or unknown phenomenon. Ask students what they would do, where they would go, or how they would resolve the dilemma posed in the visual.

3. Teach scientific inquiry by using laboratory equipment and models. Ask what students think will happen. Ask why they think it will happen. Ask what might be done if something doesn't happenm and so forth.

POSE PROBLEMS TO SOLVE

Closely related to arousal is the principle of problem-solving. Any real-life controversy or human dilemma which students find personally meaningful can be irresistable. If problems are well-chosen, students will persist in attempting to solve them even outside of class. E.g.,

1. Bring in some real people who can answer questions raised by students and can respond informally to problems posed.

2. Present a visual series of real-life cases or hypothetical situations from the field. Ask students what they might do, how they would feel, or where they would go for help.

3. Begin the lesson by showing some slides of technical procedures and ask students what step is missing, what procedures are incorrect, or how the sequence of operations might be improved. Point out that the lesson will clarify the answers to these questions.

4. Pose two solutions to a problem, both in direct conflict with one another. Let students try to determine which one is "correct."

PROVIDE PRACTICE FREQUENTLY

No matter what medium is finally selected, the likelihood of achieving your objective is greater if students practice the performance specified in the objective.

EXAMPLES

1. When using slides, proceed with the lecture and ask, "Look at the next slide. Is this an example of _____or _____?" or "In the next slide, what do you think happened to cause _____?" Be sure to provide the answers so students can correct errors in thinking.

2. When using a film, stop the film several times. Ask students to summarize what they just saw by responding to questions, such as, "What was the reason that ____?" How did these people know if ____?" or "What 3 steps did you notice were used to ____?"

3. In using a demonstration videotape or film for manipulative skill break up the long sequence of steps into smaller chunks. Stop after each major section and have students perform a few operations. Replay that portion of the tape or film again so students can check to see if they performed these few steps correctly. Continue in this manner until all steps are completed. At the very end it is best to have students practice performing all of the steps in series, until they demonstrate mastery of the entire sequence without assistance from the tape.

HELPFUL RULE FOR PRACTICE

A good rule for complex skills is:

- show them what to do
- let them do it
- tell them if they did it correctly

Practical Exercise:

1. Your students will be listening to some of your lectures in the near future. How might you use media to:

   a. arouse curiosity_____
   _____

   b. pose problems to solve_____
   _____

   c. provide practice frequently_____
   _____

ANSWERS

Any suggestions are correct if you used media to:

a. pose an arousing, confusing, ambiguous or up-ending experience for your students.
b. pose a problem to be solved via media, whether human or non-human.
c. stop the presentation at frequent intervals and pose a practice activity or question.

Find out how much you've learned by taking the Progress Check at the end of this unit.

USING MEDIA TO IMPROVE INSTRUCTION

PROGRESS CHECK

UNIT 8

Reasons to Select Media

a. Inexpensive
b. Easy to administer
c. Likely to be completed
d. Likely to get used
e. Most likely to accomplish the objectives
f. Easy to provide practice and feedback

1. You teach nature study and decide to make a tape of outdoor sounds so that students can discriminate the sounds they hear. You support the decision because of all the reasons above. What is the most important reason to justify your decision? _____.

2. Think about heightening interest in one of your very dullest driest lectures. What one medium might you select and how would you use it? Check your selection below:

MEDIUM

a. slides
b. film
c. videotape
d. audiotape
e. multi-media package
f. television
g. computer
h. overheads or transparencies
i. objects, models
j. equipment, tools, machinery
k. workbook
l. other students
m. cartoons or sketches
n. charts, tables, graphs

3. Bill is following verbal directions from a manual on how to put together a piece of machinery. He can't understand the printed instructions. What are some alternative presentations of that information?

a. _____
b. _____
c. _____

4. A student in your college is learning to read a foreign language. Name some ways the student could see or hear the new words he is learning, from something other than a book:

   a. _____
   b. _____
   c. _____

5. You've decided your students are too passive and uninvolved. How might you get them more involved?

   a. _____
   b. _____
   c. _____

USING MEDIA TO IMPROVE INSTRUCTION

Scoring Key

1. Probably (e) is the most important reason, and (f) would be the next most important. Both would lead to improved student performances.

2. Any medium selected is appropriate if you were honest in naming it, and intend to use it.

3. Pictures, slides, drawings, sketches, models, equipment, film, videotape, filmstrip. Any visual is appropriate.

4. Same as answers to #3. In addition, an audiotape would be appropriate to hear the new sounds.

5. Pose problems, use arousal, provide for practice and feedback, ask questions frequently.

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TEST CONSTRUCTION

UNIT 9

TEST CONSTRUCTION

UNIT 9

What Makes A Good Test?

	OBJECTIVE ° Identify useful test construction techniques

MAJOR PURPOSES OF TESTS

A well-constructed test is a measure of how well the instructor is presenting the material, and simultaneously, a measure of how well the student is learning the course material. The most commonly used tests are a) written examinations, b) oral examinations, and c) observations of performance. Regardless of type used, tests should be administered frequently.

KEY FACTORS

Several factors figure into the construction of every test:

1. Always provide clear, unambiguous direction on the test sheet.
2. When testing for retention of information, ask questions about the subject matter simply and directly.
3. Avoid trick questions.
4. Guard against introducing irrelevant and uncontrollable psychological factors such as excess noise and unnecessary pressures.
5. Provide for reliable, easy, and accurate scoring.

TEST ENVIRONMENT

The testing environment should be comfortable, with provisions for proper light and adequate time. There should be no distractions and a qualified instructor should be available to answer questions.

EMPHASIS

Emphasis on the test, as indicated by number and difficulty of the questions, should parallel emphasis in instruction. That is, material which received attention in 35% of the unit being tested should also be reflected in 35% of the questions on the test.

CARD FILE

Accumulate questions for the test either before or as the material is covered in the course instead of trying to compile them immediately before constructing the test. Eventually, you will have gathered a card file test item bank from which you can select most of your test items.

Practical Exercise:

You place a great deal of emphasis in your course (about 70%) on solving certain types of problems. You should construct your test in the following manner:

True or False

_____ a. About 35% should deal with problems emphasized in class.

_____ b. Test directions should be elaborate and lengthy.

_____ c. A few trick questions should be included.

_____ d. Test items should be compiled immediately before constructing the test.

ANSWERS a. False, b. False, c. False, d. False

Norm-Referenced vs Criterion-Referenced Tests

OBJECTIVE	° Compare norm-referenced and criterion-referenced tests.

NORM-REFERENCED TESTING

Norm-referenced testing is most common in standardized tests and tests published nationwide for use in many classrooms. Presently, it is also the most common type of instructor-constructed test. Norm-referenced tests have the purpose of comparing a student's scores to the scores of other students or to a norm. Any test can be a norm-referenced test; the distinction is in the way the test is scored and the use made of the scores. Norm-referenced tests can be especially useful when we want to compare students with other students for such purposes as:

1. selecting students for honors, remediation, advanced education, etc.
2. comparing students in one educational program with those in another, such as for "national norms",
3. motivating top students to strive for outstanding achievement.

CRITERION-REFERENCED TESTING

Criterion-referenced tests, tests designed specifically to measure the objectives taught, are increasingly popular. Their purpose, unlike norm-referenced tests, is to measure how well each student has attained the desired performance standard. The standard is set in advance and should reflect some degree of competence. It is possible that all students will achieve nearly the same score. Situations in which criterion-referenced tests will be of primary interest include:

1. evaluating the extent to which standards have been reached by students.

2. evaluating the quality of instruction and the effectiveness of different instructional programs.

3. diagnosing where to place students in subjects that build on prior knowledge.

CRITERION-REFERENCED TEST ITEM CONSTRUCTION

The initial step in constructing a criterion-referenced test is deciding upon the objectives or performance standards to be tested. Note the sample objectives which follow. The student will:

- Given the actual distances of the planets from the sun, compare the distances predicted by Bode's Law to all actual distances. Round figures off to three decimal places.

- Given the needed equipment, properly x-ray a patient who has been injured in the chest.

The final step is to construct test items which match the behaviors described in the objectives. Thus, if an instructor's objective is for students to apply a certain principle, the related test items must also ask for students to apply that principle. Correct responses to several test items which sample the behavior specified in the objective will allow the instructor to assume that the objective has been achieved.

Practical Exercise:

Select the appropriate test for the purpose listed below:

	Purpose	Test
___1.	To see if objectives are met.	a. Norm-Referenced
___2.	To compare students.	
___3.	To see which students deserve honors.	b. Criterion-Referenced
___4.	To see if instruction is effective.	

ANSWERS 1. b, 2. a, 3. a, 4. b.

Constructing Test Items

OBJECTIVES Identify good and poor test items for each of the following item types:

- multiple-choice
- true-false
- short answer
- essay
- matching

TEST ITEM USAGE

All five basic types of written test items (multiple-choice, true-false, short answer, matching, and essay) can be used to test memorized material. While true-false and short answer items can be used effectively to test higher level thinking, an instructor will have to construct several of these items to adequately measure a higher level objective. Essays and multiple choice items are particularly well-suited for measuring higher level thinking.

How Do You Construct Good True-False Items?

TRUE-FALSE TEST ITEMS

Since it is difficult to write a clearly true or false item without using qualifiers and other answer clues, a good true-false item is difficult to construct. If possible, avoid qualifiers. Each item should contain only one distinct idea.

EXAMPLES

Note the following good and poor examples of true-false items:

GOOD ITEMS

____ 1. The moon is the nearest celestial body to earth.

____ 2. The Dutch were the first European immigrants to settle in New York.

POOR ITEMS

____ 1. The brightest stars are always the closest. (Clue to the falseness is given by the absolute "always" used in the item.)

____ 2. No picture + no sound in a television set may indicate a bad 5U4G tube. (Ambiguous because of the word "may".)

TRUE-FALSE RULES

If a true-false test is well-constructed, "yes" will be the answer to all of the following questions.

1. Is each item unambiguous in meaning, (i.e., will each student interpret the item in the same way)?
2. Are the items based upon statements that are absolutely true or false, without qualifications or exceptions?
3. Has the central point of each question been highlighted by placing it in a prominent position?
4. Are the items free from double-barreled statements that are partly true and partly false?
5. Are the items free from qualifiers and absolutes which give unnecessary clues? (For example, words such as sometimes, never, maybe, and usually should be omitted if possible.)
6. Are trick questions avoided?
7. Are negative questions avoided, if possible?
8. Does each item contain one distinct idea?

Practical Exercise:

If you wish, here is an opportunity to practice what you have just read. Write G next to the items which seem good and P next to the items which seem poor.

Check your answers below.

TRUE-FALSE ITEMS

_____ 1. Freezing weather is not infrequently unknown in southern California.

_____ 2. A functioning heart may depend on diet.

_____ 3. There is no hope for the pulp of a young tooth which has become partially inflamed.

_____ 4. Mona Lisa was painted by Michaelangelo.

ANSWERS 1. poor (double negatives); 2. poor (ambiguous, partly due to the word clue "may"); 3. poor (an absolute is used); 4. good.

How Do You Construct Good Multiple Choice Items?

MULTIPLE CHOICE TESTS

Multiple choice items give the student a choice of answers to a question; the student is asked to identify the best answer. At least four possibilities are preferable, each one being plausible, but only one being the best answer. The item stem may be in the form of either a direct question or an incomplete sentence. In the case of an incomplete sentence, it is important that the introductory statement make a complete and correct sentence when combined with each of the choices. Avoid duplication of words in the choices by placing them in the stem if possible. As you examine the good and poor examples below, note that some measure memory while others measure higher level thinking.

GOOD ITEMS

____ 1. The final battle of the Revolutionary War was the Battle of

a. Vicksburg
b. Yorktown
c. Bunker Hill
d. Delaware River

____ 2. What is the area in square inches of a right triangle with 3-inch and 4-inch sides adjacent to the right angle?

a. 6.5 b. 0.7 c. 0.12 d. none of these

POOR ITEM

_____ 1. Plate current

a. never increases.
b. gradually increases.
c. increases to a point, when the filament voltage is raised, provided the plate voltage is held constant.
d. is a measure of plate resistance. (This is a poor example because the correct answer is the longest one, an unnecessary clue.)

MULTIPLE CHOICE RULES

If your mutltiple choice items are well-written, you should be able to answer "yes" to each of the following questions.

1. Is a question posed or can a question be made from the incomplete statement?
2. Does the question or incomplete statement give adequate information?
3. Are the items presented in clear and simple language with vocabulary kept as simple as possible?
4. Does each item have one and only one correct answer?
5. Are all responses plausible and attractive to students who lack the information or ability tested by the item?
6. Are double negative statements avoided?

7. Are grammatical clues, word clues, and length clues avoided?

8. Are the responses, so far as possible, arranged in numerical or logical order?

Practical Exercise:

If you wish, here is an opportunity to practice what you have just read. Place G next to good items; place P next to poor items.

____1. What led to the formation of the States Right Party?

a. The level of federal taxation.
b. The demand of the states for the right to make their own laws.
c. The industrialization of the South.
d. The corruption of many city governments.

____2. Which method tests the ability to retrieve information intact from the memory?

a. Recall
b. Recognition
c. Relearning
d. Memorization

____3. A synonym for "gaunt" is

a. ugly
b. ill
c. haggard
d. aged

ANSWERS

1. poor (Word clue in response b., i.e., "of the states for the right". This response is also longest.)

2. good

3. good

How Do You Construct Good Matching Items?

MATCHING TEST ITEMS

Matching items are most appropriate for long tests or for tests that concentrate heavily on limited amounts of subject matter. Matching items are particularly well-suited for testing the following kinds of information: terms and definitions, events and dates, problems and solutions, the names of symbols, and vocabulary in a foreign language.

When constructing matching tests, several guidelines should be observed. To avoid extraneous clues, each matching item should contain homogeneous content; the state and capital matching item below is a good illustration of this. The directions should specify the basis for each match, which is also illustrated in the state and capital item below. There should never be more than fifteen items per column. The responses should be arranged in random order in the right-hand column, and extra choices should be included to reduce the possibility of guessing correctly. Note the following examples of good and poor matching items.

EXAMPLES

Good Item

Directions: Match the state capitals in Column B with the corresponding states in Column A.

Column A	Column B
____1. Texas	a. Raleigh
____2. New York	b. Sacramento
____3. California	c. Austin
____4. Washington	d. Albany
____5. North Carolina	e. Olympia
	f. Charleston
	g. Reno
	h. Montpelier

Poor Item

Directions: Match the premises in Column A with the responses in Column B.

Column A		Column B	
____1.	egregious	a.	Billy Bud
____2.	Herman Melville	b.	flagrant
____3.	HNO_3	c.	measures blood pressure
____4.	sphygmomanometer	d.	nitric acid
		e.	Whisperjet

(This is a poor item because heterogeneous content is used. Thus, even students who do not know the content will have clues to the correct answer.)

MATCHING ITEM RULES

After the test has been written, all of the following questions should be answered "yes".

1. Are the two columns to be matched based on homogeneous content (i.e., a single concept)?
2. Do the directions clearly indicate the basis upon which the lists are to be matched: for example, are inventors matched with inventions?
3. Are the matching lists free from extraneous clues due to grammatical construction and verbal associations?
4. Is the list of responses longer than the list of premises to preclude guessing by elimination?
5. Are the longer, more complex statements used as premises and the shorter statements used as responses?

How Do You Construct Good Short Answer Items?

SHORT ANSWER TEST ITEMS

Short answer questions are those to which the student supplies from one word up to one or two specific sentences. Care should be taken not to make short answer items too general or too trivial. One type of short answer item is an incomplete statement with a key word or phrase missing, often called a fill-in-the-blank. A second type of short answer item is a direct question. Notice the good and poor examples below.

EXAMPLES

GOOD ITEMS

1. The person who wrote the Illiad was _____.
2. What is the meaning of egregious?

POOR ITEMS

1. Who was George Washington? (This item is too general. No pun is intended.)
2. A _____ test is one that is deliberately constructed to yield _____ that are directly interpretable in terms of specified _____.
   (There are too many blanks.)

SHORT ANSWER RULES

If a short answer test is well-written, "yes" will be the response to all of the following questions.

1. Is each statement sufficiently unambiguous to limit the correct answer to a few specific words or statements?
2. Are the items specific without being trivial?
3. In general, does the omitted part of an incomplete statement come at the end of the statement?
4. Is only one word or phrase omitted from each incomplete statement?
5. Are the items free from extraneous clues due to grammatical structure, length of blank space, and so forth?

6. Do computational problems indicate the expected degree of precision in the answer. For example:

   a. Are answers to be rounded off?

   b. Are units (such as square yards or feet per second) to be included by the student in his answer?

How Do You Write Good Essay Items?

ESSAY ITEMS

Essay tests can measure knowledge of general information, understanding of basic principles, or ability to apply principles to unfamiliar situations. The best use of essays is for testing higher level thinking, such as application, analysis, synthesis, and evaluation.

While essay tests are fairly easy to construct, they are difficult to score due to many subjective factors such as writing ability and legibility. Experiments have shown that two equally competent instructors may be as much as forty points out of a hundred at variance in scoring the same exam. The best solution is to prepare a scoring key ahead of time to be used when scoring each response.

EXAMPLES

When writing an essay test, an instructor must limit the problem so that everyone who reads the question will get the same meaning from it. The essay question must ask for specific answers. For example, instead of saying "Compare and contrast the Lincoln and Andrew Johnson Administrations," it is preferable to say, "Compare and contrast them with regard to four major domestic policies. Five points will be awarded for each major policy you discuss correctly." Note these other good examples:

1. List at least five reasons why protecting metals from corrosion is especially important in air craft and give a short justification for each reason. Each reason is worth one point; each justification is worth three points.

2. Compare and contrast Henri Matisse's use of color before, during, and ten years after the Fauvist period. You will receive five points for each idea you adequately defend. You should refer to specific paintings to illustrate your points; you may examine a book of Matisse prints as you answer this question.

ESSAY TEST RULES

If you carefully construct an essay test, you will be able to answer "yes" to all of the following questions.

1. Are essay questions restricted to measurement of objectives not readily measured by other types of questions?

2. Are essay questions framed around specific problems adequately delimited in scope?

3. In general, is use made of several brief essay questions rather than one or two extended ones?

4. Does each essay question indicate clearly and accurately the desired extent and depth of the answer?

   a. Does the question indicate clearly how many reasons, examples, or arguments are expected for full credit?

   b. Does the direction to explain, outline, state, or com are indicate accurately the type of answer that will receive full credit?

SCORING ESSAY ITEMS

One way to minimize bias is to score essays item by item rather than student by student. Ensure ahead of time that you do not know whose paper you are correcting. Then read and score item one on every test paper. Afterwards, rearrange the order of the test papers and score all answers to item two, and so forth.

SCORING KEY

A second method of minimizing bias is to write a model answer for each question ahead of time. Use your model answer to construct a check list of the important points. Assign numerical scores to each item on your check list. Then reread your essay question to be sure you have told students exactly what you want. Use this scoring key when you read each paper to score it.

Test Replay

REVIEWING TEST WITH STUDENTS

There are at least two good reasons why instructors should review an instructor-made test with the students after it has been corrected. The first is that going over the test is an excellent learning experience for the students. At this time, the instructor can clear up misunderstandings and give remedial help.

IMPROVING TEST WRITING

Another reason for reviewing the test is that the instructor will gain insight into the way students interpret the questions. Allowing students to challenge the correctness of an answer, to tell why they answered an item the way they did, and to ask questions about the meaning of certain items will give the instructor clues about ways to construct better test items next time.

SUMMARY

The Progress Check at the end of this unit will help you see how much you've learned or if you achieved the objectives. (Does that make it a norm-referenced or criterion-referenced test?)

TEST CONSTRUCTION

PROGRESS CHECK

UNIT 9

Part One: Directions - Below are good and poor examples of test items. Place "G" on the line beside good items; place "P" on the line beside poor items.

_____ 1: (true-false item) COBOL and FORTRAN are the only computer languages used.

_____ 2. (multiple choice item) The D/FW Regional Airport is controlled by a board

a. appointed by COG.

b. chosen by the county commissioner.

c. chosen by the two city councils.

d. elected at large from the two counties involved.

_____ 3. (short-answer item) List the five steps of the scientific method in the order in which they most frequently occur.

_____ 4. (essay question) Select your favorite author and analyze his or her style. Your essay should be two pages or less. Grammar, spelling, and punctuation will be judged as well as the quality of your ideas.

_____ 5. (true-false item) The binary number system is a modernized version of the Arabic number system.

Part Two: Provide a Brief answer to each item.

6. The best use of essays is to measure _____.

7. Essays should be scored by use of a _____.

8. What chief characteristic of norm-referenced testing distinguishes it from other common types of testing?

9. What chief characteristic of criterion-referenced testing distinguishes it from norm-referenced testing?

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GRADING AND EVALUATION

UNIT 10

GRADING AND EVALUATION

UNIT 10

INTRODUCTION

Nothing causes more discussion among instructors than grading and evaluation procedures. Despite impressive research findings, instructors are often reluctant to depart from traditional letter grading. However, grading and evaluation are like other aspects of instruction: all can be improved.

OBJECTIVE	° Construct a simple evaluation plan.

EVALUATION PLAN

This final unit in the series suggests a simple evaluation plan, consisting of a series of recommendations. The result should be that you can:

° maintain straightforward records to monitor student progress,

° revise your evaluation procedures where needed, and

° communicate course requirements to students with clarity.

FIVE STEPS

All of the first 5 steps should be pursued by instructors until achieved. If you do no more than these 5 things you will do a reasonable job of evaluating your students.

1. SET CLEAR STANDARDS

> 1. Set Clear Standards
>
> Write your instructional objectives (Unit 5) and/or write your test procedures (Unit 9).

Most instructors write their objectives or tests after teaching the content. You should try to write the objectives, quizzes, or test questions before presenting instruction. Share your objectives with students as you teach. Show them sample test items. This allows students to concentrate their efforts on what you most want them to learn.

2. SCHEDULE PROGRESS CHECKS

> 2. Schedule Frequent Progress Checks.
>
> Many short progress checks help the students realize their achievements. This creates motivation.

Progress checks include all kinds of tests: final exams, "midterms", weekly quizzes, oral quizzes, etc. Progress checks should also include a broad variety of other desired performances such as laboratory assignments, written reports, oral reports to class, reports of field assignments (museum, artistic events, public radio and TV presentations, etc.) Obviously the progress checks should reflect your objectives.

3. DESIGN A GRADING SYSTEM

> 3. Design Your Grading Plan.
>
> Decide on what student performance will be required for the grade to be assigned.

Look in the school catalogues or faculty manual and find out what grades have been authorized by the Board. Often, a letter grade system is in effect, with these options:

A, B, C, D, F

There is usually some provision for withdrawal, or incomplete, or a non-punitive X. Sometimes it is possible to select a "pass--fail" or "credit--no credit" option.

If the "credit-no credit" option is available, your decisions are straightforward. You must decide what performance you require on each progress check (test, quiz, essay, etc.) When these performance levels are met, student receives "credit" or "pass."

CRITERION SYSTEM

If letter grades are to be used you must extend the process above to each grade. Here is the procedure recommended by one large community college district:

> The criterion-referenced system which is based on performance standards, can be used to assess motor skills, retention, and higher level thought. The basic feature of the criterion system of grading is the concept of mastery. To use this system, an instructor should first specify performance objectives. Next, the achievement expected for each letter grade should be fully described. Note the example below:
>
> Criteria for a Grade of "A"
>
> 90% on final exam
> 3 or more assigned reports completed satisfactorily
> 2 field assignments completed satisfactorily
> 90% on all quizzes
>
> The instructor should design written, oral and/or performance tests and quizzes to determine whether students have or have not attained the course objectives. Finally, instructors should allow students to retake tests until the objectives have been mastered.

COMMUNICATE CRITERIA USED

You should modify these procedures until you have a basis for deciding how each grade will be assigned. Then, communicate your criteria for assigning grades to your students!

4. LABEL ROSTER

> 4. Label Your Roster
>
> Students' names are placed in left-hand column. Each progress check is assigned to a column to the right.

Mark the progress checks as each student accomplishes them. Certainly students (even instructors) procrastinate; nevertheless, students learn more if they study at their own rate. You are entirely justified in allowing extra time for any student who needs it. If your students learn more, you have done a better job of teaching.

5. REVIEW AND REVISE TESTS

> 5. Review Tests with Your Students
>
> Go over each progress check with your students. Revise so as to reduce the ambiguities and other problems which your students show you.

Student comments are your best aid in clarifying your progress checks. Use these comments to help revise test questions.

The above 5 steps represent the bare minimum which all instructors should accomplish--if not in thier first year, at least by their second.

FOUR STEPS

The following 4 steps will improve your teaching. You are not likely to accomplish all of them early in your teaching. Do these things whenever you can.

REVISE INSTRUCTION

> 6. Revise Inadequate Instruction
>
> Think vertically as you review your roster. If many students failed one certain progress check, you can improve your teaching here.

PRACTICAL EXERCISE

"Think vertically" means that you should examine your roster periodically, and see where students have trouble. Suppose part of your roster (simplified) looked like this:

ROSTER

	Quiz 1	Quiz 2	Oral Report 1	...etc.
Avila	OK	RE-DO	OK	
Black	OK	RE-DO	OK	
Chang	RE-DO	OK	OK	
Douglas	OK	RE-DO	OK	
...etc.				

As you tabulated the results of Quiz 1, Quiz 2, and Oral Report I, which would you decide showed the most need for revision of instruction?

ANSWER You should revise the topics covered by Quiz #2. Most had trouble with it. Talk to the students! Ask them what confused them. Find out what changes would help.

ASSIST STUDENTS

7. Help Students Pass Tests

Allow students to repeat alternate forms of tests. Where possible allow them to choose when to take tests.

This idea sometimes disturbs teachers. However, when we really want students to show mastery, we collaborate in helping them pass:

-we give a para-medic extra time where needed to learn cardio-pulmonary resuscitation,

-we allow pilots to take proficiency exams when ready.

-we tutor drivers who can't yet drive safely.

Think of yourself as a colleague to each of your students. You will be working together for student success.

ADD TEST ITEMS

8. Increase Your Test Items.

Add questions and problems which prove student achievement in various aspects of your objectives.

Give your students a chance to show that a correct answer was not just by luck. Could they define a term and give an example, and pick a paraphrase from a list?

HAVE TESTS REVIEWED

> 9. Have Your Tests Reviewed.
>
> Ask other teachers whether your tests and grading procedures seem reasonable.

Others can often suggest improvements to your tests.

PRACTICAL EXERCISE

To review, see if you can recall which is the first, second, and third thing you should do according to the procedure proposed. Mark 1, 2, 3 below:

_____ Schedule frequent progress checks
_____ Design your grading plan
_____ Set clear standards

ANSWER

We hope you answered:

2d, 3d, 1st from the top to bottom. Your grading plan (Step 3) requires that you know how many kinds of progress checks (Step 2) will be used (tests, quizzes, etc.). You need all of your objectives and tests (Step 1) to decide how to break them into exams, reports, quizzes, etc. Remember: selection and preparation of objectives and tests precede instruction.

CHECK STUDENT MORALE

> 10. Check Student Morale Often.
>
> Ask students to tell anonymously how they feel about your course procedures and content.

Most instructors hope students are positive about course content and procedures. By responding candidly, students can help you improve the relevance of the course for them.

NEW EVALUATION PRACTICES

What you have been learning represents new and improved evaluation practices in the most advanced community colleges. These practices are sometimes referred to by new terms. It is not essential that you know the terms, but if you hear them in the future, they are:

- Mastery Learning - where a student is allowed time to learn each step before being forced ahead to new learning steps.
- Ends-oriented Instruction - where teacher decides what student is to learn before planning instruction (means).
- Criterion-referenced Evaluation - where teacher monitors each student's achievement of every objective, instead of comparing the student's achievement to the group.
- Formative Evaluation - wherein teachers revise inadequate tests and instruction so as to improve student achievement.

LESS DESIRABLE PROCEDURES

The Appendix on page 10 contains descriptions of some common but less desirable grading and evaluation procedures. You may wish to skim this section to see what your more modern approach has replaced.

SUMMARY

When ready, please complete the Progress Check which follows.

GRADING AND EVALUATION

PROGRESS CHECK

UNIT 10

1. On the left check the five steps considered to be the most important or bare minimum for evaluation.

   Most

   a. _____ Label student roster
   b. _____ Increase numbers of test items
   c. _____ Design grading plan (A, B, C., etc.)
   d. _____ Set clear standards (objectives/tests)
   e. _____ Revise inadequate instruction
   f. _____ Schedule frequent progress checks
   g. _____ Review tests with students
   h. _____ Help students pass tests
   i. _____ Have others review tests.

2. From the list above, show by letter (a-i) which step is represented below:

   _____ Teacher asks another if he thinks a certain quiz is too difficult.

   _____ Teacher says "let's go over the test."
   _____ Teacher adds more examples to lecture due to poor test performance.
   _____ Teacher writes progress checks into vertical columns.
   _____ Teacher sets criteria for assigning A's, B's, ...etc. to book reports.
   _____ Teacher breaks mid-term exam into 3 quizzes.
   _____ Teacher says "let's see how to do this problem. There will be one like it on the exam."

   For those who read the Appendix, try this question:

3. Your brother-in-law who teaches psychology at the university nearby says to you loudly at a party: "Why don't you grade on the curve like we do?" What socially acceptable answer would you give him?

   _____
   _____
   _____

GRADING AND EVALUATION

SCORING KEY

1.
a.	X
b.	
c.	X
d.	X
e.	
f.	X
g.	X
h.	
i.	

2.
i
g
e
a
c
f
h

3. You might have said:

a) Grades should reflect student performance ability, not how one student compared to the current crop.

b) Some students fail and some receive A's <u>regardless</u> of whether they have done well or poorly on course objectives.

c) Grading on the curve reduces motivation of the group. Most must receive average or below average marks, regardless of whether they achieve course goals.

d) Grading on the curve allows students to graduate with good grades whether or not they can meet any specific performance standards.

If you mentioned a couple of these items, you should congratulate yourself.

We hope you did well.

Good luck.

APPENDIX

For those interested in more traditional approaches to grading and evaluation, this section presents research oriented measurement concepts. The main section of this unit showed how to assign grades based on whether students mastered course objectives. Some instructors want to compare students to each other regardless of what was learned. Grading on the normal curve does this.

Grading on the Curve

Teachers who grade on a curve base their grades on how well a particular student performs compared to the other students in a class. A predetermined percentage are assigned "A's, another percentage are assigned "B's," and so forth. How a teacher determines the percentages is often arbitrary. A curve is often used to determine percentages of letter grades to assign. Teachers who utilize the normal curve assign equal percentages of "A's" and "F's" and of "B's" and "D's". The virtue of curve grading is that it is readily understood by parents, students, and administrators. The flaws of curve grading are numerous:

> Regardless of how well students perform, a certain percentage will fail, and no matter how little students learn, a certain percentage will receive "A's". Because the use of grading curves creates unstable standards in comparable classes, and because curves are often unfair, they generally should be used with caution or avoided.

Test Item Analysis

Traditional item analysis tells instructors to throw out test items unless approximately one-half of the students miss them. This eliminates those items that most students get right and those which most get wrong. It also may eliminate items which are essential to show that students have mastered important objectives!

> It is better to:
>
> a) revise the item if it is ambiguous, or,
> b) revise your instruction until students can answer the item.

If you give your post-tests as pre-tests, you may wish to drop items which students answer correctly on both. You can't teach what they already know!

Test Reliability

Some testing texts recommend that you calculate "split-half reliability" coefficients. This requires that you divide a test into odd-numbered versus even-numbered halves. Student scores on each half are then compared, with similar performance proving test reliability.

However, this assumes that all your tests and quizzes have a) a fairly large number of items, and b) items which are homogeneous, that is, measure the same kinds of skills or tasks. Neither assumption is likely for most instruction.

It is better to simply provide as many test questions as needed to convince you that your students have mastered the objectives.

Test Validity

While there are several ways of evaluating whether a test measures what it is intended to measure, content validity is the most useful method for evaluating classroom tests. If a test has content validity, the percentage of test items related to any one topic should mirror the percentage of class time spent on that topic. The level of test items and whether they measure memory or thought also should match the level of a teacher's classroom objectives. For example, a test designed to measure the ability to apply Boyle's Law would have high validity only if students were instructed to solve problems. Note the sample chart below which is useful for checking the content validity of either a norm or a criterion-referenced classroom test.

Course Unit	Course Emphasis	Test Emphasis	Level of Course Goals	Level Of Test
4	20%	40%	Memory	Memory
5	20%	40%	Application	Application
6	10%	20%	Problem Solving	Problem Solving
	50% Total	100% Total		

The procedure shown may seem a bit laborious. However you are likely to apply a similar procedure intuitively when you decide a student's overall course grade. Writing out the process can make your instructional planning more precise. As you become more experienced, give it a try!

REFERENCES

UNIT 10

General Reference on most topics in this unit:

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On any topic in this unit, see selections from this excellent film strip series:

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On grading practices, not necessarily community college oriented:

Warren, J.R. College Grading Practices: An Overview. ERIC Clearinghouse on Higher Education, 1971.

Milton, O. and Edgerly, J. The Testing and Grading of Students. Change Magazine Publishers, 1976.

For the very best reference on objectives and test item samples, especially for those in the humanities or social sciences who are not certain how to apply the ideas in this unit:

Bloom, B., Hastings, T., and Madaus, G. Handbook for Formative and Summative Evaluation of Student Learning. McGraw-Hill, 1971.

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